Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	1	40

INDEX OF PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

NH-P099(552)E

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN SAN JOAQUIN COUNTY IN LODI

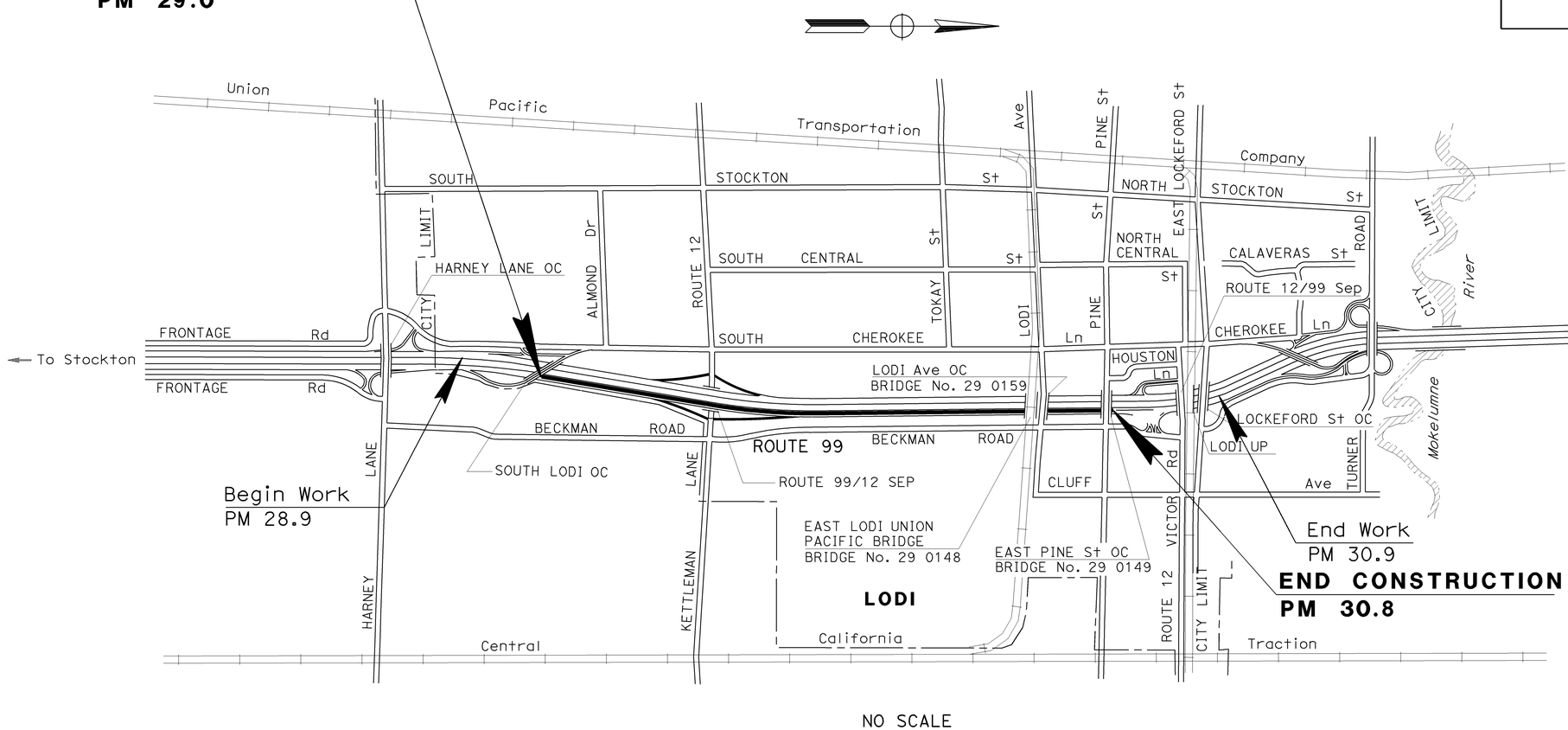
FROM 0.5 MILE NORTH OF HARNEY LANE OVERCROSSING TO

EAST PINE STREET OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

LOCATION MAP

BEGIN CONSTRUCTION
PM 29.0



NO SCALE

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

6/07/11
DATE

June 13, 2011
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
MARY J. STEVENS
No. 75552
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

PROJECT MANAGER: AJAIB BRAR
DESIGN ENGINEER: JOSE HUERTA

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No.	10-0V8704
PROJECT ID	1000020425

LAST REVISION 06-13-11
DATE PLOTTED => 19-AUG-2011
TIME PLOTTED => 13:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	2	40

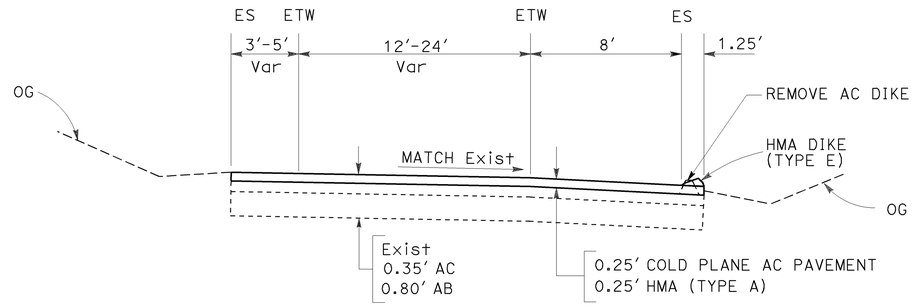
REGISTERED CIVIL ENGINEER — DATE: 6-07-11

PLANS APPROVAL DATE: 6-13-11

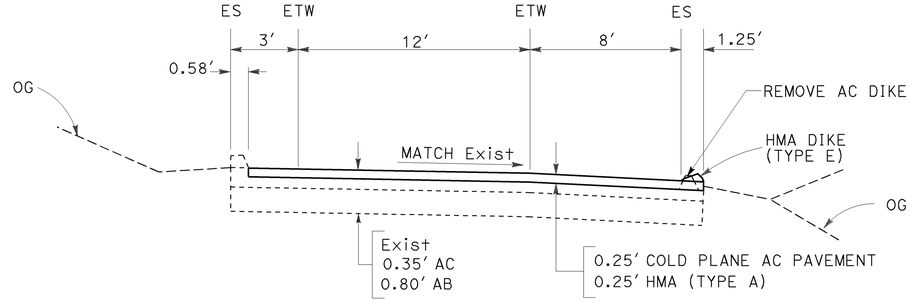
MARY J. STEVENS No. 75552 Exp. 6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

NOTES:

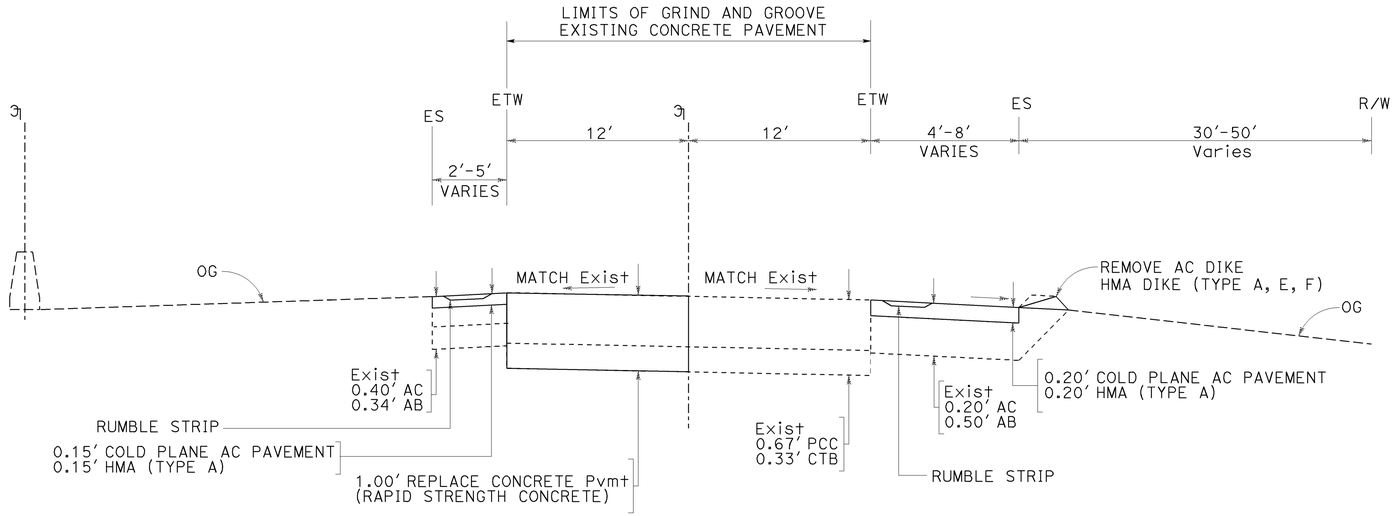
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. FOR REPLACE CONCRETE PAVEMENT DIMENSIONS AND LOCATIONS, SEE SUMMARY OF QUANTITIES SHEET.
4. FOR COLD PLANE DIMENSIONS AND LOCATIONS, SEE SUMMARY OF QUANTITIES.



ROUTE 99/12 SEPARATION
OFF-RAMPS



ROUTE 99/12 SEPARATION
ON-RAMPS



PM 29.0/30.8

ROUTE 99 NORTHBOUND LANES

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY | DATE REVISED
MARY J STEVENS | JOSE HUERTA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans

LAST REVISION 06-13-11 | DATE PLOTTED => 28-JUN-2011 | TIME PLOTTED => 13:43

BORDER LAST REVISED 7/2/2010 | USERNAME => s113541 | DGN FILE => a0v870ca001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1457 | PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	3	40

REGISTERED CIVIL ENGINEER — DATE 6-07-11

MARY J. STEVENS No. 75552 Exp.6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE 6-13-11

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ABBREVIATION:

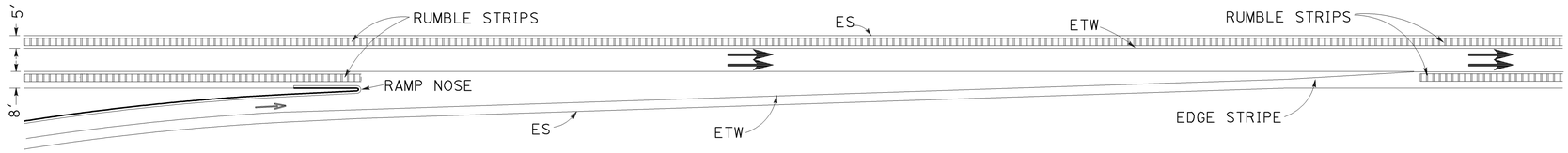
WWM - WELDED WIRE MESH

LEGEND:

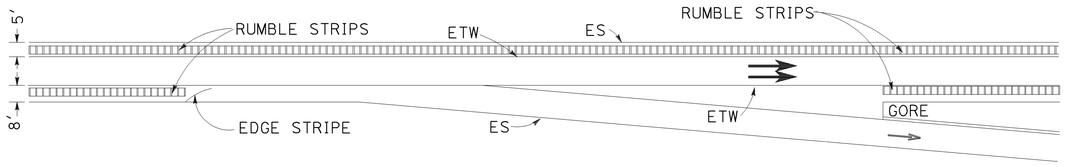
AREAS TO RECEIVE MINOR CONCRETE (TEXTURED PAVING) BRICK BASKET WEAVE

- COLD PLANE AC PAVEMENT HMA (TYPE A)

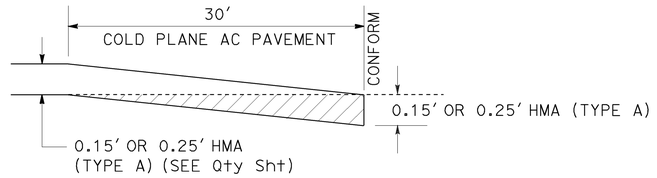
- DIRECTION OF TRAVEL



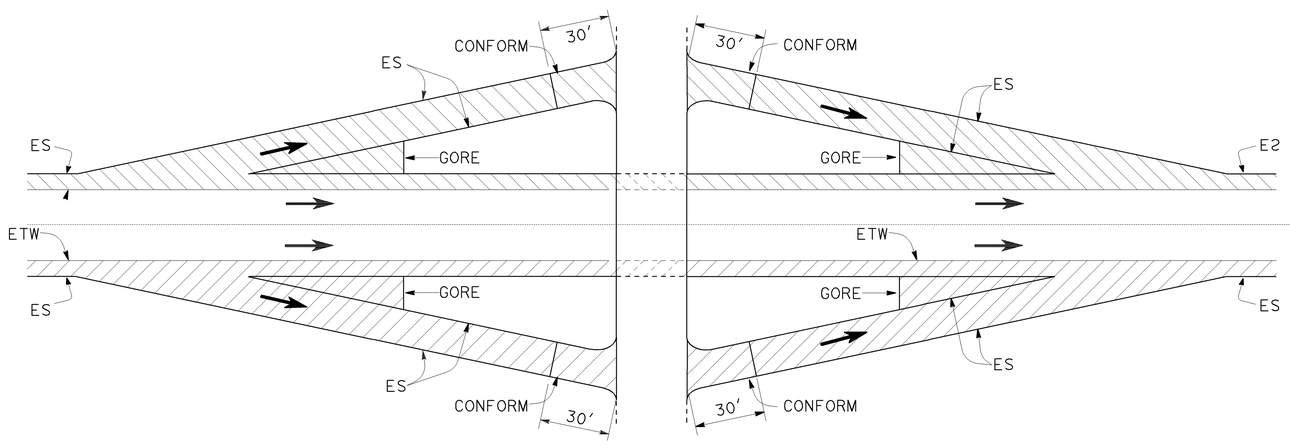
TYPICAL ON-RAMP RUMBLE STRIP



TYPICAL OFF-RAMP RUMBLE STRIP



CONFORM TAPER AT ON/OFF-RAMPS



PAVING ON/OFF-RAMPS ROUTE 99/12 SEPARATION

CONSTRUCTION DETAILS

NO SCALE — **C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans® 06-DESIGN

FUNCTIONAL SUPERVISOR: JOSE HUERTA

CALCULATED-DESIGNED BY: MARY J STEVENS

CHECKED BY: JOSE HUERTA

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 28-JUN-2011 | 06-13-11 | TIME PLOTTED => 13:43

BORDER LAST REVISED 7/2/2010 | USERNAME => s113541 | DGN FILE => a0v870ga001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1457 | PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	4	40

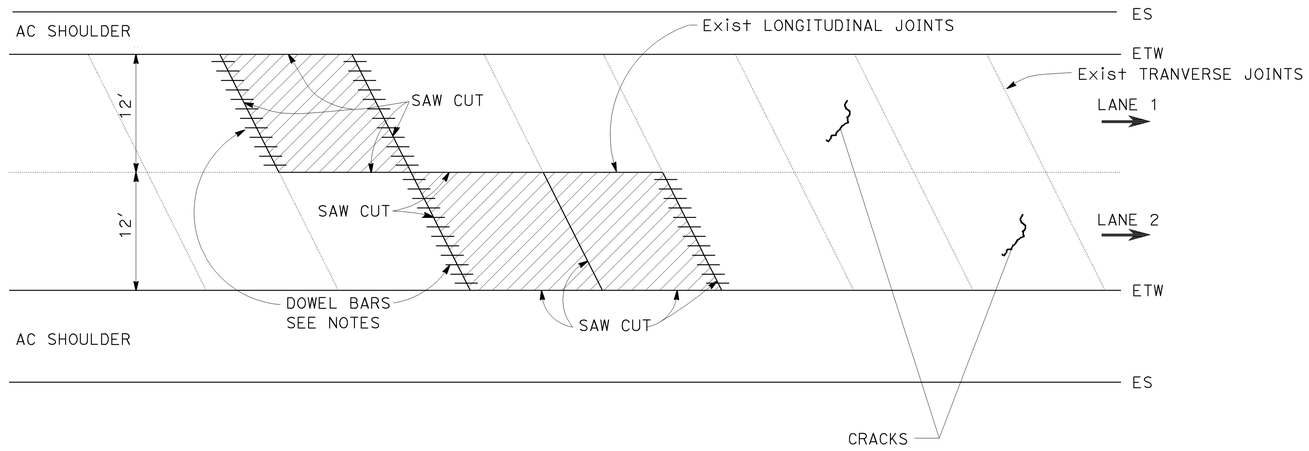
REGISTERED CIVIL ENGINEER — DATE: 6-07-11

PLANS APPROVAL DATE: 6-13-11

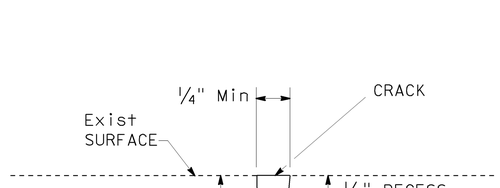
REGISTERED PROFESSIONAL ENGINEER — MARY J. STEVENS — No. 75552 — Exp. 6-30-12 — CIVIL — STATE OF CALIFORNIA

NOTES (THIS SHEET ONLY):

1. FOR DETAILS NOT SHOWN, SEE STANDARD PLANS P1, P8, & P10.
2. SIDE FORMS SHALL BE USED WHERE EDGE PAVEMENT IS ADJACENT TO ASPHALT CONCRETE.
3. DOWEL BARS SHALL BE USED TO TIE NEW SLABS TO EXISTING SLABS.



PCC PANEL REPLACEMENT AND CRACK TREATMENT DETAIL



CRACK TREATMENT DETAIL

CONSTRUCTION DETAILS

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans

FUNCTIONAL SUPERVISOR: JOSE HUERTA

CALCULATED-DESIGNED BY: MARY J STEVENS
CHECKED BY: JOSE HUERTA
REVISED BY
DATE REVISED

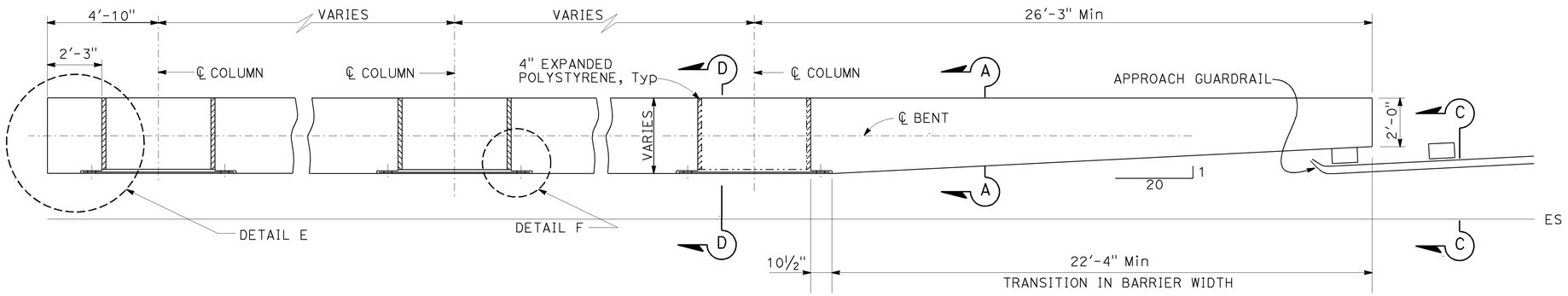
LAST REVISION — DATE PLOTTED => 28-JUN-2011, TIME PLOTTED => 13:43
06-13-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	5	40

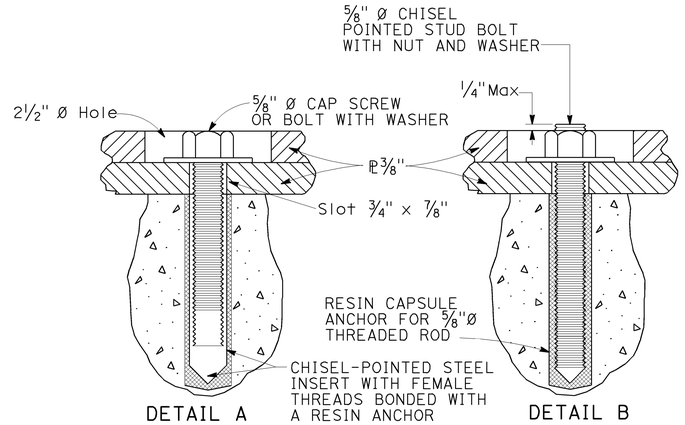
6-07-11
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
MARY J. STEVENS
No. 75552
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

6-13-11
PLANS APPROVAL DATE

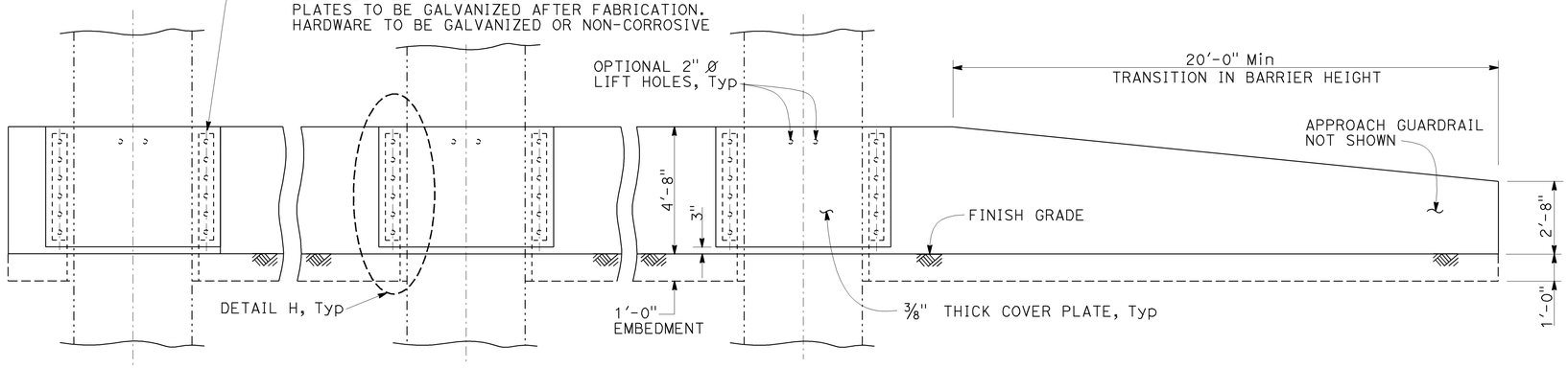


PLAN-RECTANGULAR COLUMNS



ALTERNATIVE ANCHORAGE

SEE NOTES 1 AND 2



ELEVATION

CONCRETE BARRIER (TYPE 60) (VERTICAL FACE)

NOTES: (THIS SHEET ONLY)

1. RESIN CAPSULE ANCHORAGE IS SUBJECT TO APPROVAL OF THE ENGINEER. INSTALLATION PROCEDURES SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS
2. DETAIL B IS SIMILAR TO DETAIL A EXCEPT FOR ANCHORAGE DEVICES.
3. THE CONTRACTOR SHALL VERIFY ALL CONTROLLED FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIALS.
4. FOR ADDITIONAL DETAILS SEE C-4

CONSTRUCTION DETAILS

NO SCALE

C-3

CALCULATED-DESIGNED BY: PERCY MARAGOS
CHECKED BY: JOSE HUERTA
FUNCTIONAL SUPERVISOR: JOSE HUERTA
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans®

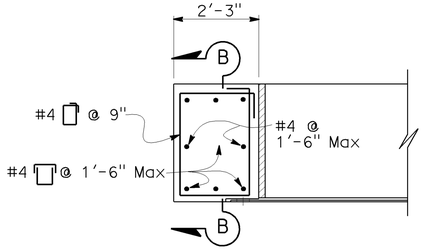
LAST REVISION 06-13-11
DATE PLOTTED => 28-JUN-2011
TIME PLOTTED => 13:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	6	40

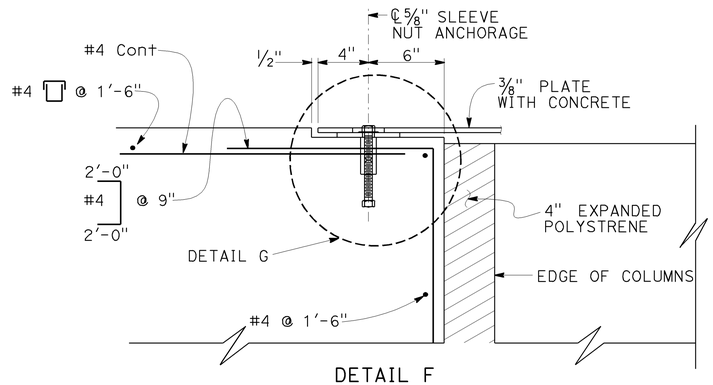
REGISTERED CIVIL ENGINEER — 6-07-11 DATE

MARY J. STEVENS No. 75552 Exp. 6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

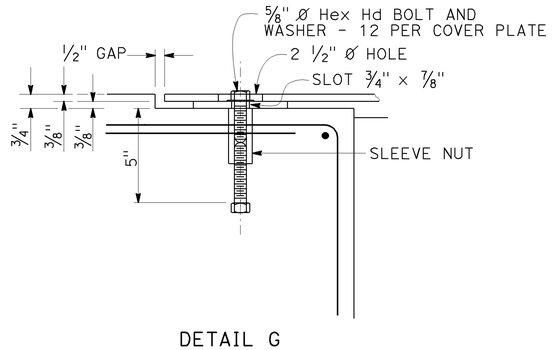
6-13-11
PLANS APPROVAL DATE



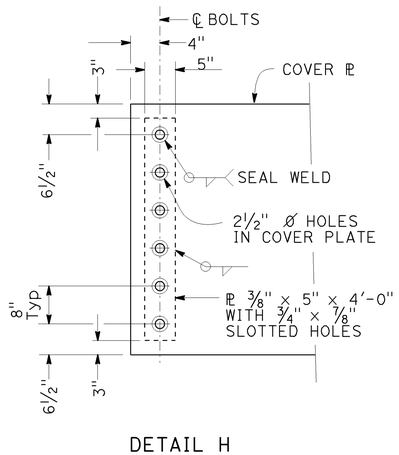
DETAIL E



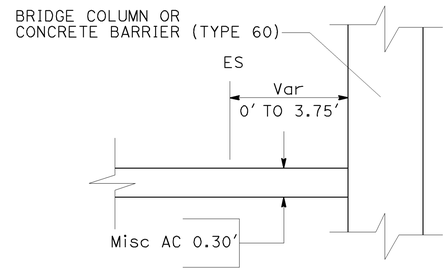
DETAIL F



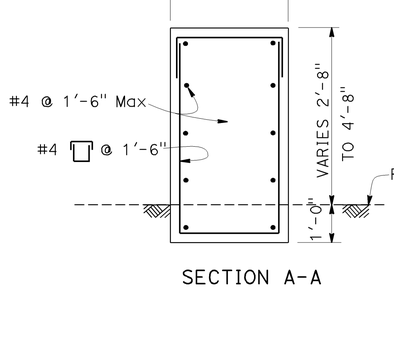
DETAIL G



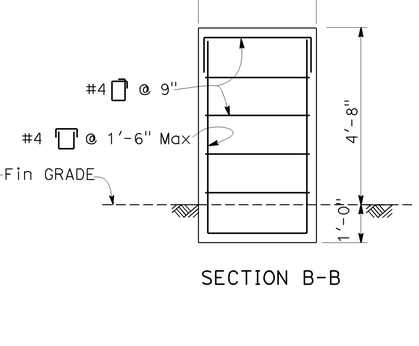
DETAIL H



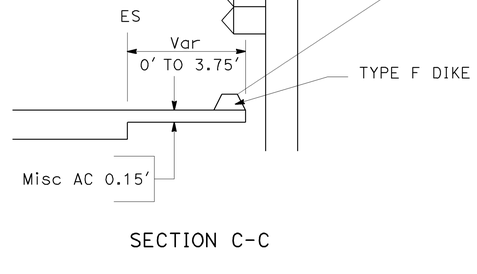
SECTION D-D



SECTION A-A



SECTION B-B



SECTION C-C

CONSTRUCTION DETAILS

NO SCALE **C-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
PERCY MARAGOS	JOSE HUERTA	JOSE HUERTA		

LAST REVISION 06-13-11 | DATE PLOTTED => 28-JUN-2011 | TIME PLOTTED => 13:43

BORDER LAST REVISED 7/2/2010 | USERNAME => s113541 | DGN FILE => a0v870ga004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1457 | PROJECT NUMBER & PHASE 10000204251

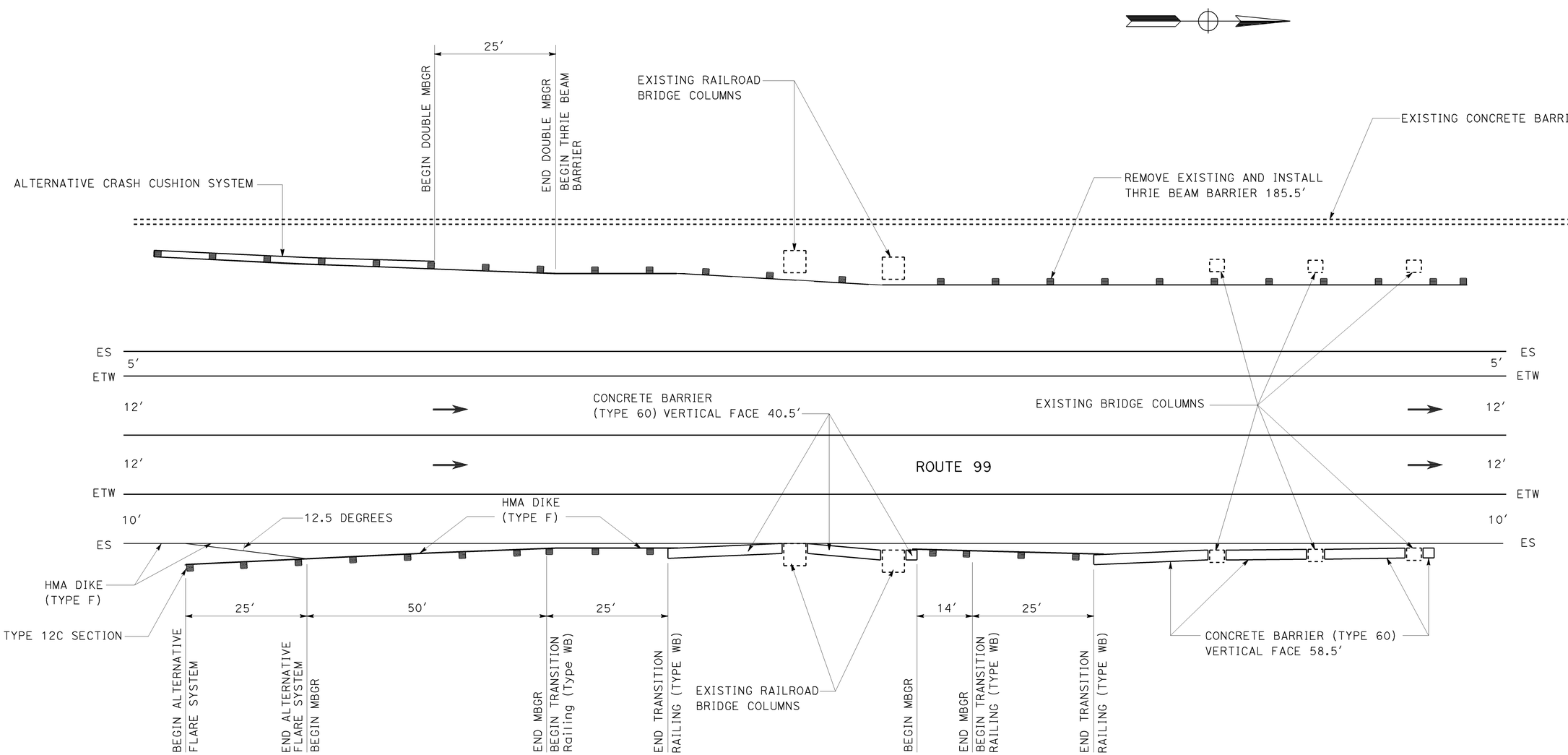
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	7	40

REGISTERED CIVIL ENGINEER — DATE: 6-07-11

MARY J. STEVENS No. 75552 Exp.6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE: 6-13-11

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



EAST LODI UNION PACIFIC BRIDGE (PM 430.8) AND THE LODI AVENUE OVERCROSSING (PM 30.51

CONSTRUCTION DETAILS

NO SCALE

C-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

06-DESIGN

Caltrans

FUNCTIONAL SUPERVISOR: JOSE HUERTA

CALCULATED-DESIGNED BY: PERCY MARAGOS

CHECKED BY: JOSE HUERTA

REVISED BY

DATE REVISED

LAST REVISION: 06-13-11

DATE PLOTTED => 28-JUN-2011

TIME PLOTTED => 13:43

BORDER LAST REVISED 7/1/2010

USERNAME => s113541

DGN FILE => a0v870ga005.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1457

PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	8	40

REGISTERED CIVIL ENGINEER — 6-07-11 DATE

MARY J. STEVENS No. 75552 Exp.6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

6-13-11
PLANS APPROVAL DATE

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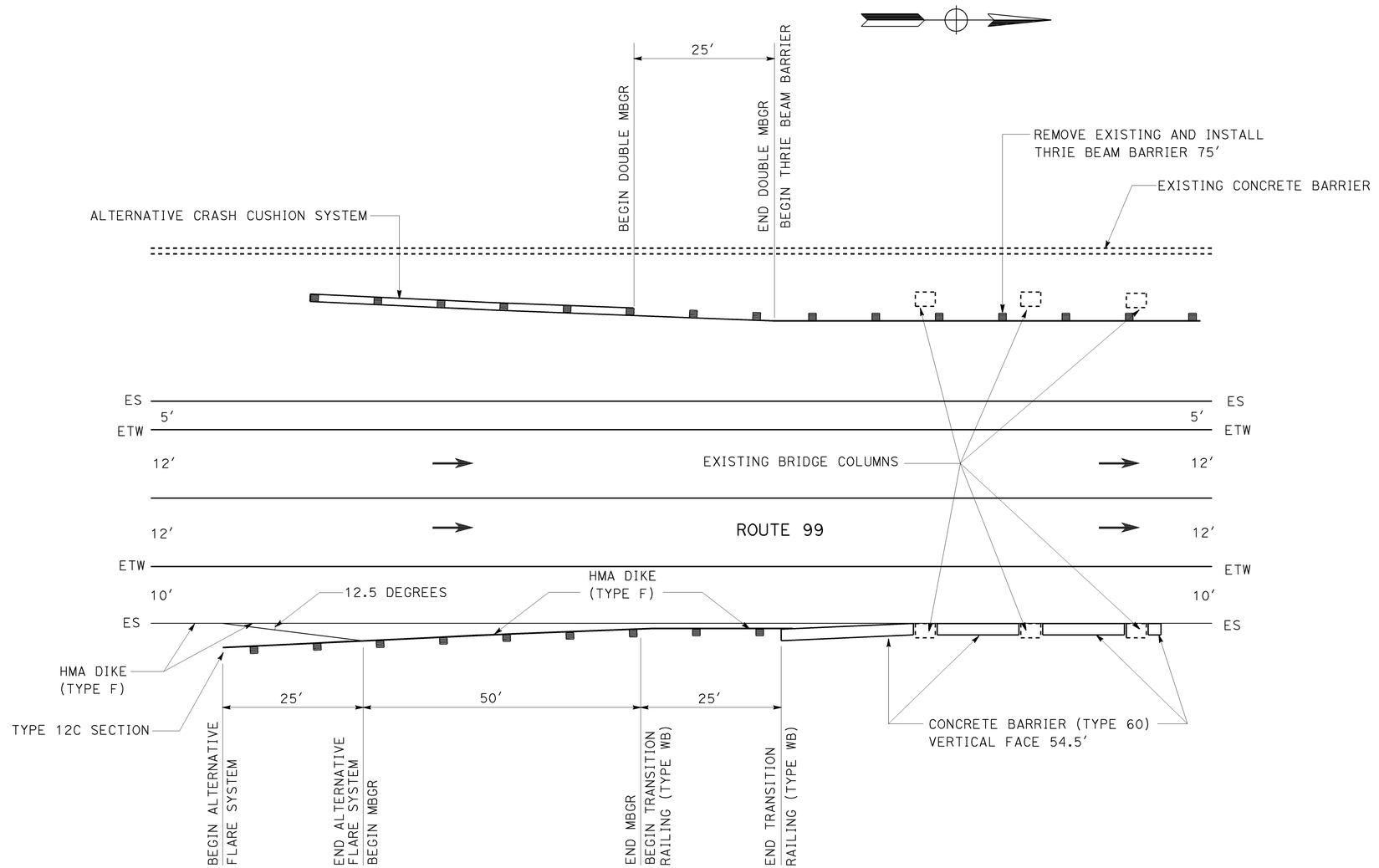


EAST PINE STREET OVERCROSSING

PM 30.72

CONSTRUCTION DETAILS

NO SCALE

C-6

PERCY MARAGOS
JOSE HUERTA
CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY
DATE REVISED

FUNCTIONAL SUPERVISOR
JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN

Caltrans

LAST REVISION 06-13-11
DATE PLOTTED => 28-JUN-2011
TIME PLOTTED => 13:43

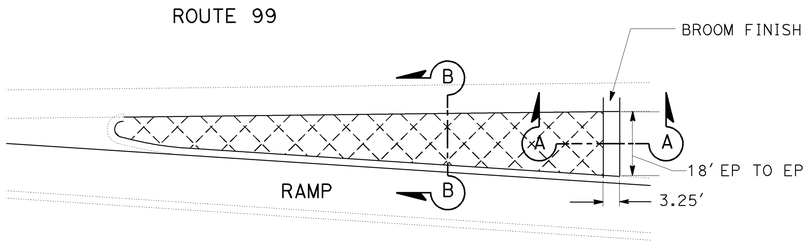
BORDER LAST REVISED 7/1/2010
USERNAME => s113541
DGN FILE => a0v870ga006.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1457
PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	9	40

REGISTERED CIVIL ENGINEER — DATE: 6-07-11

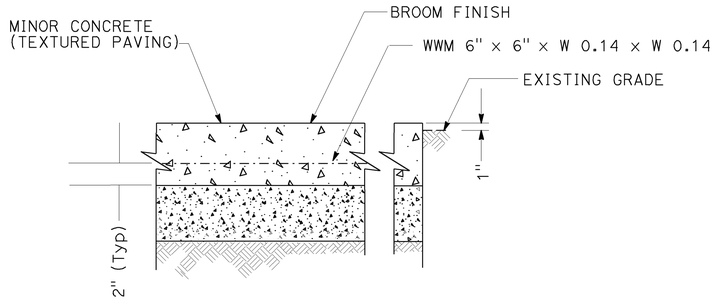
MARY J. STEVENS No. 75552 Exp. 6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE: 6-13-11

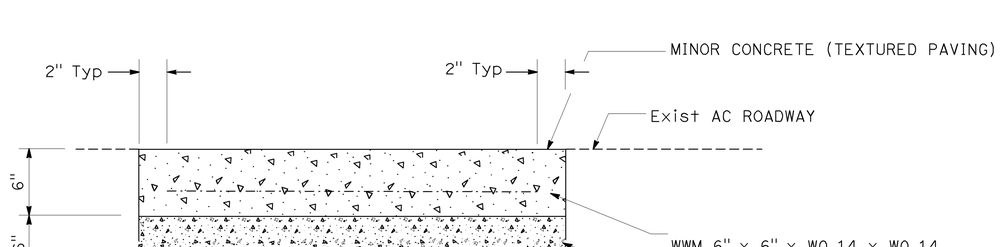


PLAN (Typ)

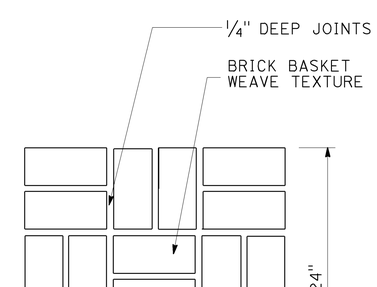
ROADSIDE GORE AREA



SECTION A-A



SECTION B-B



BRICK BASKET WEAVE
TEXTURED PATTERN

ROUTE 99/12 ROADSIDE GORE AREA
MINOR CONCRETE (TEXTURED PAVING)

CONSTRUCTION DETAILS

NO SCALE

C-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE
FUNCTIONAL SUPERVISOR: BRAD COLE
CALCULATED-DESIGNED BY: ROBYN FONG
CHECKED BY: BRAD COLE
REVISED BY
DATE REVISED

LAST REVISION 06-13-11
DATE PLOTTED => 28-JUN-2011
TIME PLOTTED => 13:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	10	40

REGISTERED CIVIL ENGINEER — DATE: 6-07-11

PLANS APPROVAL DATE: 6-13-11

REGISTERED PROFESSIONAL ENGINEER — MARY J. STEVENS No. 75552 Exp. 6-30-12 CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REVISED BY | DATE REVISED

MARY J. STEVENS | JOSE HUERTA

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: JOSE HUERTA

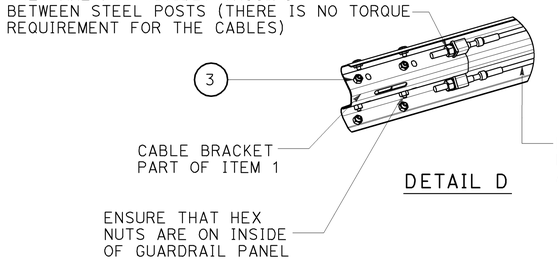
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

06-DESIGN

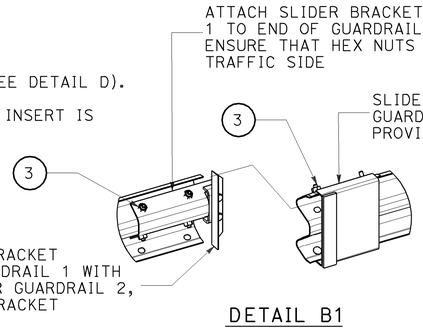
Caltrans

NOTES (THIS SHEET ONLY):

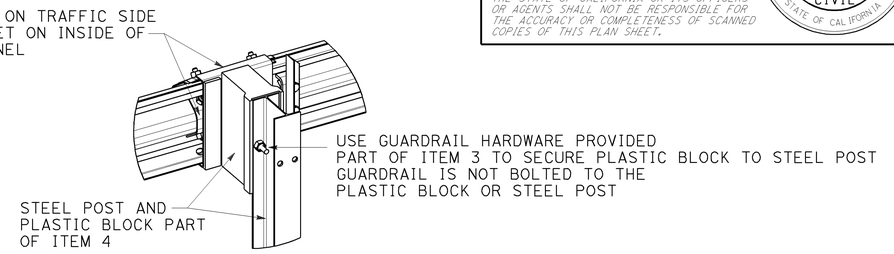
1. SEE MANUFACTURER PLANS FOR ADDITIONAL DETAILS AND DIMENSIONS NOT SHOWN.
2. SYSTEM TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. ONLY TIGHTEN THE CABLE ASSEMBLIES USING THE NUTS AT THE CABLE BRACKET (SEE DETAIL D). DO NOT TIGHTEN THE CABLES AT THE FRONT OF THE GROUND ANCHOR.
4. WHEN DRIVING STEEL POST, ENSURE THAT A DRIVING CAP WITH TIMBER OR PLASTIC INSERT IS USED TO PREVENT DAMAGE TO THE GALVANIZING TO THE TOP OF THE STEEL POST.



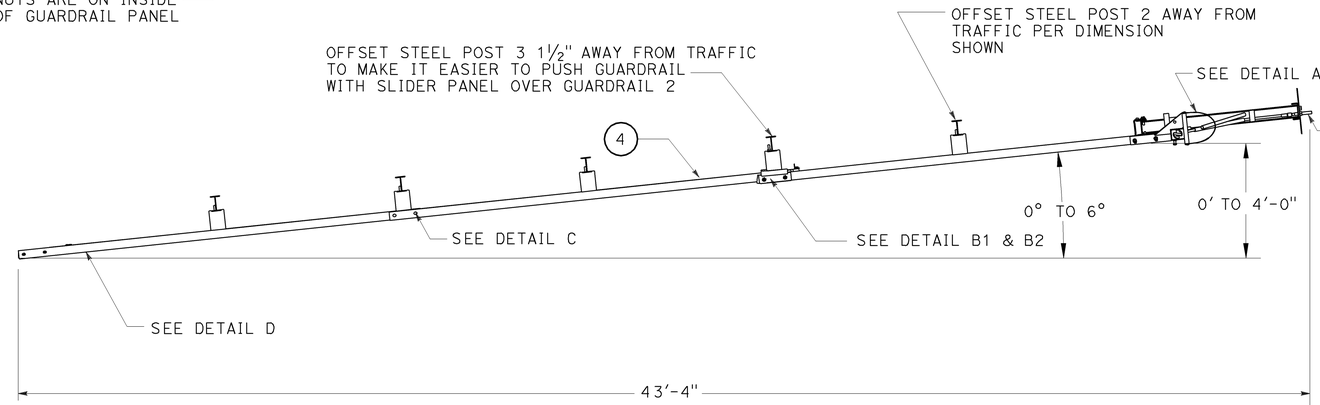
DETAIL D



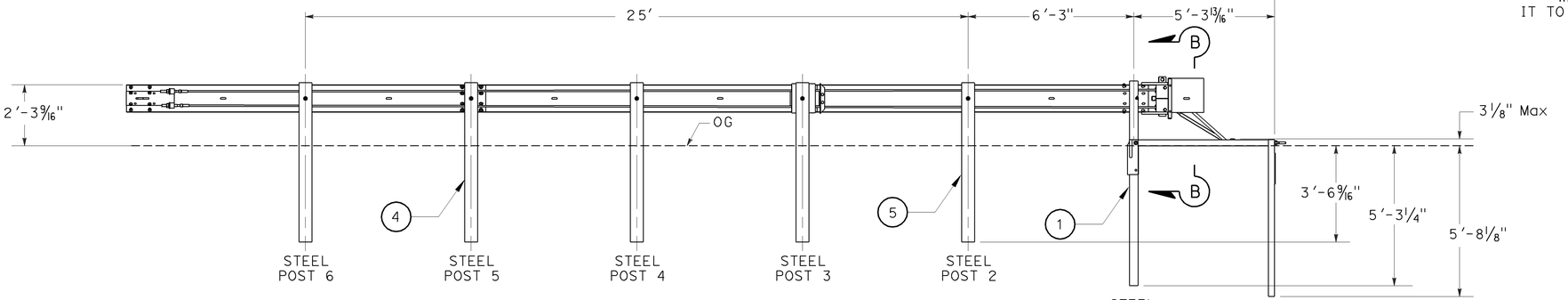
DETAIL B1



DETAIL B2



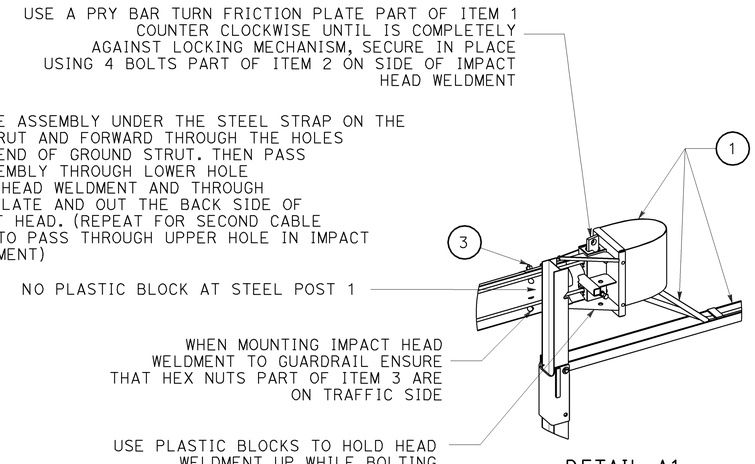
FLARED TERMINAL SYSTEM DETAIL



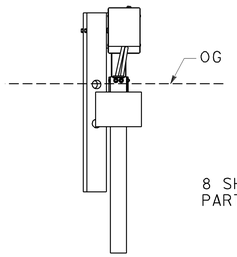
TERMINAL SYSTEM (TYPE X-TENSION) DETAIL

LEGEND

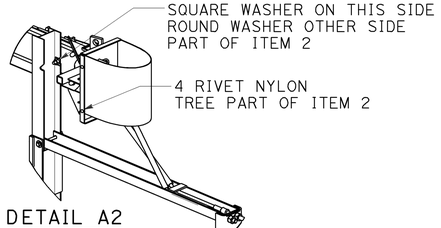
ITEM	DESCRIPTION
1	TERMINAL SYSTEM (TYPE X-TENSION) COMPONENT KIT
2	TERMINAL SYSTEM (TYPE X-TENSION) HARDWARE KIT
3	TERMINAL SYSTEM (TYPE X-TENSION) SYSTEM HARDWARE KIT
4	TERMINAL SYSTEM (TYPE X-TENSION) GUARDRAIL COMPONENT KIT 3
5	TERMINAL SYSTEM (TYPE X-TENSION) I-BEAM POST



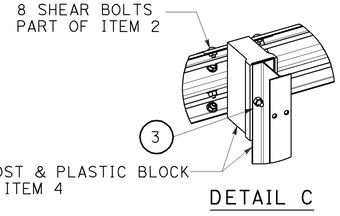
DETAIL A1



SECTION B-B



DETAIL A2



DETAIL C

CONSTRUCTION DETAILS

NO SCALE

C-8

LAST REVISION | DATE PLOTTED => 28-JUN-2011 | TIME PLOTTED => 13:43 | 06-13-11

BORDER LAST REVISED 7/2/2010 | USERNAME => s113541 | DGN FILE => a0v870ga008.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1457 | PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	11	40

7-25-11
REGISTERED CIVIL ENGINEER DATE

6-13-11
PLANS APPROVAL DATE

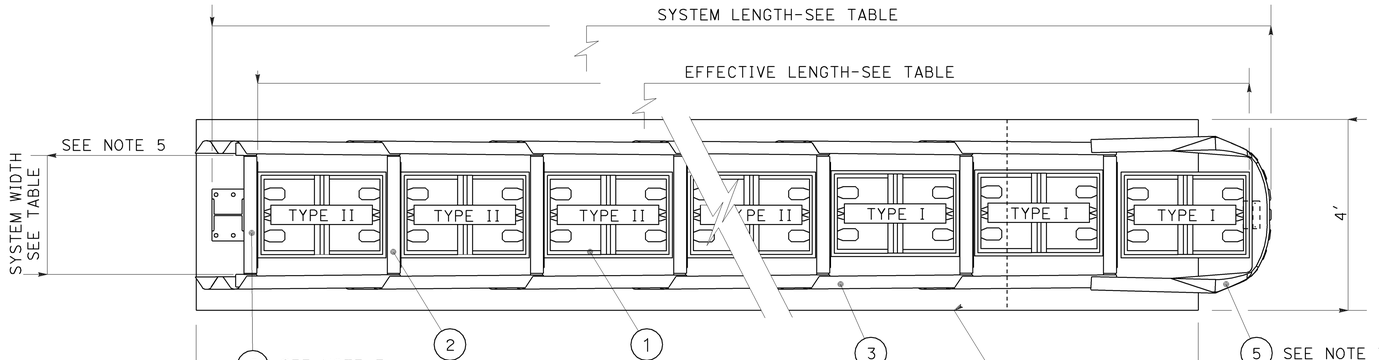
REGISTERED PROFESSIONAL ENGINEER
MARY J. STEVENS
No. 75552
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

LEGEND:

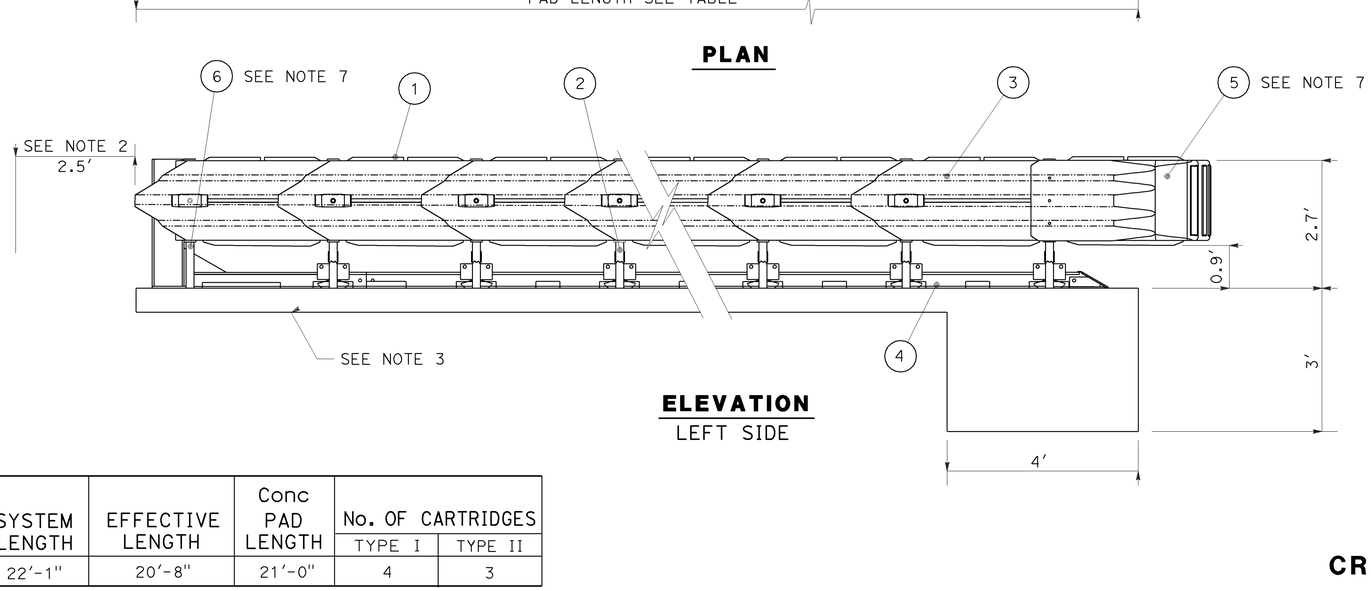
1. QUADGUARD CARTRIDGE
2. DIAPHRAGM
3. FENDER PANEL
4. MONORAIL
5. NOSE ASSEMBLY
6. BACKUP

NOTES:

1. FOR CONCRETE PAD DETAILS, SEE MANUFACTURER'S DETAILS.
2. PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 2.5' Min.
3. 0.50' Min REINFORCED 4000 PSI PC CONCRETE PAD OR 0.67' Min NON-REINFORCED 4000 PSI PC CONCRETE ROADWAY, MEASURING AT LEAST 12' WIDE BY 50' LONG.
4. FOR DETAILS OF QUADGUARD SYSTEM COMPONENTS NOT SHOWN, INCLUDING CONCRETE BACKUP AND CONCRETE PAD DIMENSIONS, AND BAR REINFORCING STEEL, SEE MANUFACTURER'S RECOMMENDATIONS.
5. BACKUP AND NOSE ASSEMBLIES NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.
6. THE NUMBER OF BAYS INDICATED IN THE TABLE IS BASED ON CALCULATED VALUES TO ENSURE ADEQUATE SYSTEM CAPACITY TO DISSIPATE THE LONGITUDINAL IMPACT ENERGY OF A 4400 POUNDS VEHICLE TRAVELING AT THE SPEED INDICATED.



PLAN



ELEVATION
LEFT SIDE

BAYS	30" WIDTH MODEL No.	SYSTEM LENGTH	EFFECTIVE LENGTH	Conc PAD LENGTH	No. OF CARTRIDGES	
					TYPE I	TYPE II
6	QS3006G	22'-1"	20'-8"	21'-0"	4	3

CONSTRUCTION DETAILS

CRASH CUSHION (TYPE QUADGUARD)

NO SCALE

C-9

MARY J. STEVENS — CALCULATED-DESIGNED BY
JOSE HUERTA — CHECKED BY
REVISED BY — DATE REVISED
FUNCTIONAL SUPERVISOR: JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
Caltrans

LAST REVISION 06-13-11
DATE PLOTTED => 19-AUG-2011
TIME PLOTTED => 13:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	12	40

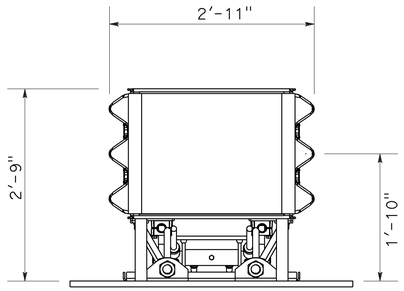
REGISTERED CIVIL ENGINEER — 6-07-11 DATE

6-13-11
PLANS APPROVAL DATE

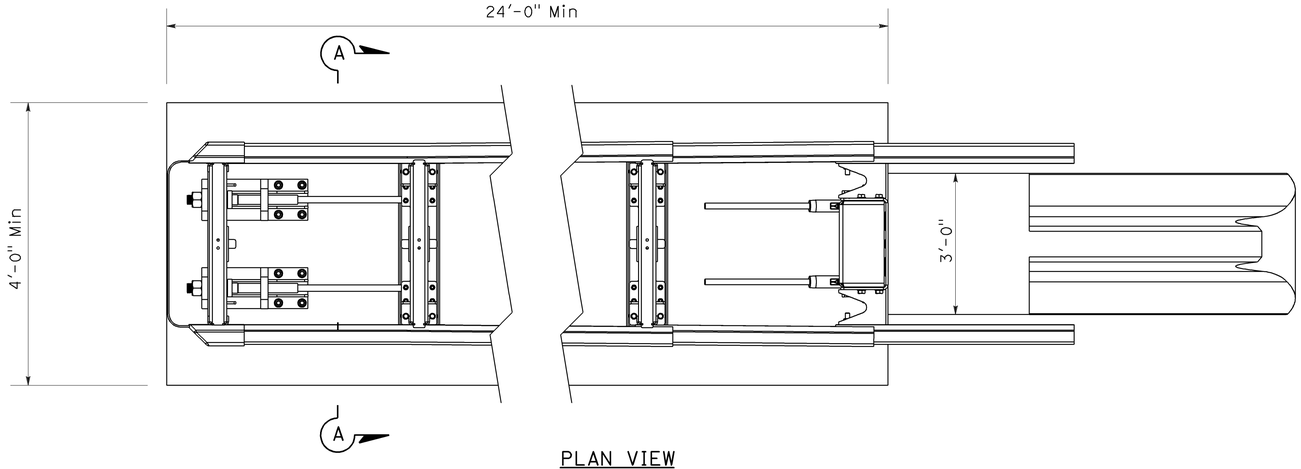
REGISTERED PROFESSIONAL ENGINEER
MARY J. STEVENS
No. 75552
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

NOTE (THIS SHEET ONLY):

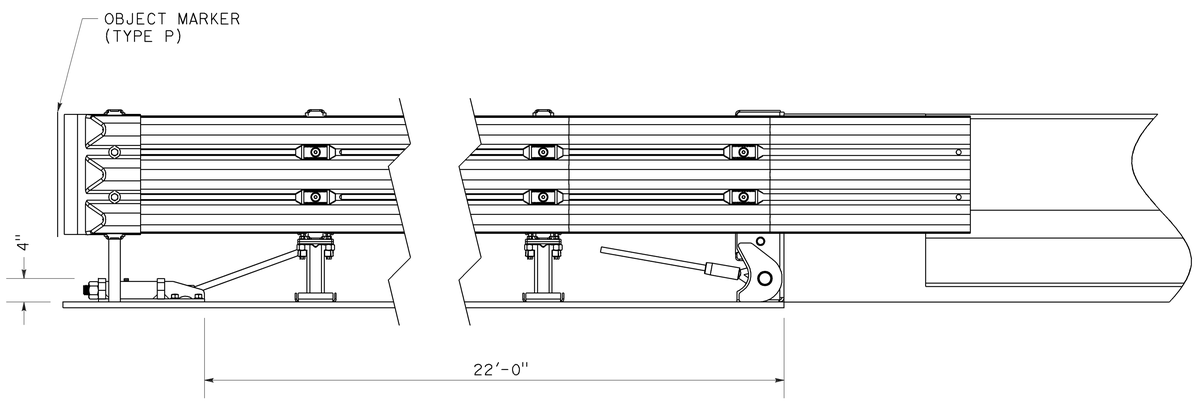
INSTALLATION TO COMPLY WITH MANUFACTURER'S INSTRUCTIONS.
FOR ADDITIONAL INFORMATION AND ALL ACCESSORIES FOR TAU-II SYSTEM,
SEE MANUFACTURER'S DETAILS. TO GET TO THE MANUFACTURER'S WEB SITE,
GO TO : HTTP://BARRIERSYSTEMSINC.COM/.



SECTION A-A



PLAN VIEW



ELEVATION

CONSTRUCTION DETAILS

CRASH CUSHION (TYPE TAU-II)
MODEL No. 30T100PBC

NO SCALE

C-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
06-DESIGN

CALCULATED-DESIGNED BY: MARY J. STEVENS
CHECKED BY: JOSE HUERTA
FUNCTIONAL SUPERVISOR: JOSE HUERTA
REVISED BY
DATE REVISED

LAST REVISION 06-13-11
DATE PLOTTED => 03-AUG-2011
TIME PLOTTED => 10:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	13	40

Hassan Taha 01/21/11
REGISTERED CIVIL ENGINEER DATE

6-13-11
PLANS APPROVAL DATE

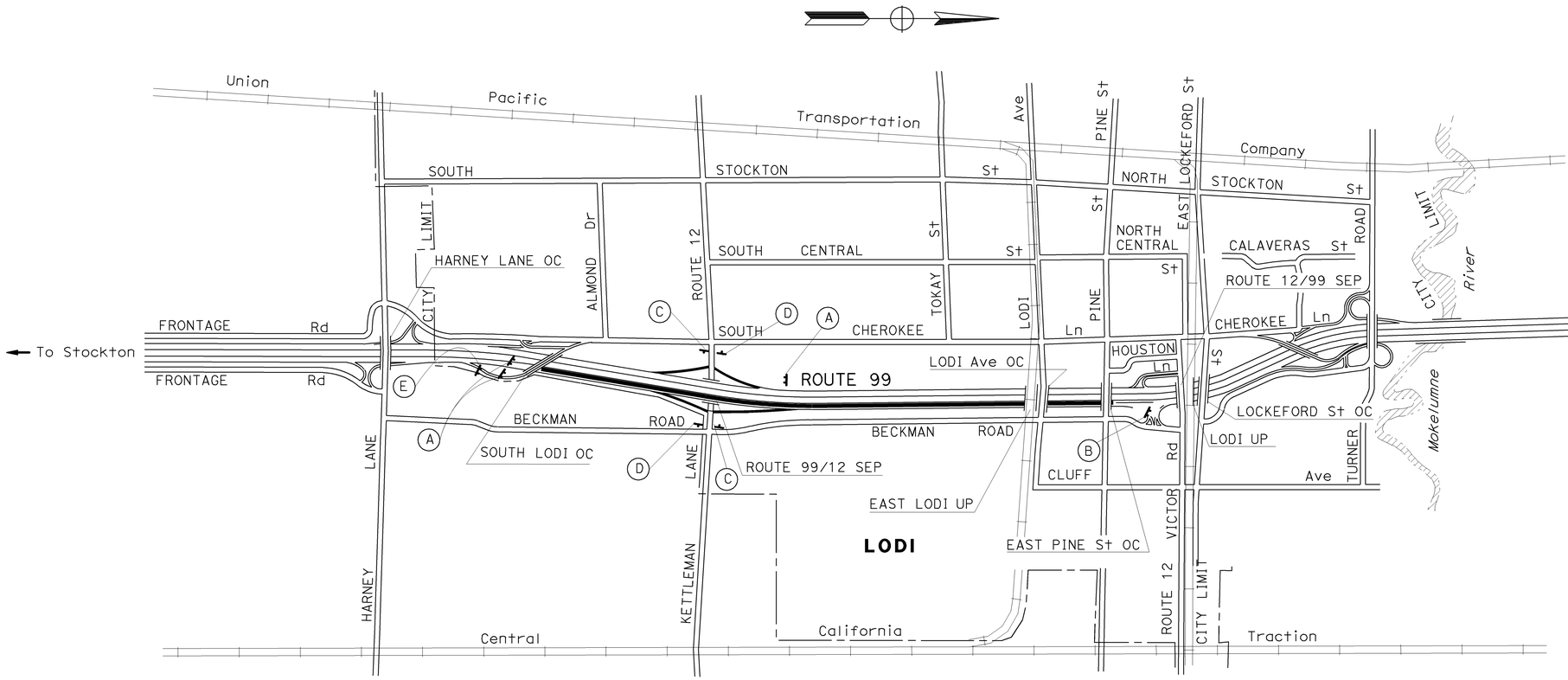
REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/12
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS	POST SIZE	No. OF SIGNS
(A)	W20-1	60" x 60"	ROAD WORK AHEAD	2	6" x 6"	3
(B)	G20-2	60" x 24"	END ROAD WORK	2	4" x 4"	1
(C)	W20-1	48" x 48"	ROAD WORK AHEAD	1	6" x 6"	2
(D)	G20-2	48" x 24"	END ROAD WORK	1	4" x 6"	2
(E)	C40	102" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2	6" x 6"	1

NOTE: EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.



THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

REVISED BY | DATE REVISED

HASSAN TAHA | KEVIN NGUYEN

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
06-TRAFFIC DESIGN

LAST REVISION | DATE PLOTTED => 28-JUN-2011 | TIME PLOTTED => 13:43
06-13-11

BORDER LAST REVISED 7/2/2010

USERNAME => s113541
DGN FILE => a0v8701a001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 06386

PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	14	40

Hassan Taha 01/21/11
REGISTERED CIVIL ENGINEER DATE

6-13-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/12
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PAVEMENT DELINEATION QUANTITIES

	LOCATION	DIRECTION	DETAIL No.	PAVEMENT MARKER (RETROREFLECTIVE)			THERMOPLASTIC TRAFFIC STRIPE				THERMOPLASTIC PAVEMENT MARKING	
				TYPE C	TYPE G	TYPE H	4" SOLID	8" SOLID	4" BROKEN (36-12)	4" BROKEN (17-7)		
	PM/PM				EA	EA	LF	LF	LF	LF	DESCRIPTION	SQFT
ROUTE 99	29.00/30.75	NB	27B				9,240				1- LIMIT LINE(36')	36
	29.00/30.75	NB	12		194				9240		3- TYPE III ARROW	126
		NB	14A	12								
	29.00/30.75	NB	25			194	9,240				3- TYPE II (L) ARROW	135
	29.32/29.38	NB	36		30			634			2-"SIGNAL"	64
	29.66/29.71	NB	36A		12			264			2-"AHEAD"	62
	29.71/29.74	NB	8							158		
SR-12 WEST KETTLEMAN LANE ON-RAMP		NB	25A			10	211					
		NB	27B				211					
SR-12 WEST KETTLEMAN LANE OFF-RAMP		NB	25A			18	396					
		NB	27B				396					
		NB	9		8					317		
		NB	38		5			106				
SUBTOTAL				12	249	222	19,694	1004	9240	475		423
				483			19,694	1004	9240	475		423

HASSAN TAHA — CALCULATED-DESIGNED BY
KEVIN NGUYEN — CHECKED BY
REVISED BY
DATE REVISED
MOHAMMED QATAMI — FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-TRAFFIC DESIGN
Caltrans

PAVEMENT DELINEATION QUANTITIES

PDQ-1

LAST REVISION 06-13-11
DATE PLOTTED => 28-JUN-2011
TIME PLOTTED => 13:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	15	40

REGISTERED CIVIL ENGINEER — DATE 6-07-11

PLANS APPROVAL DATE 6-13-11

REGISTERED PROFESSIONAL ENGINEER — MARY J. STEVENS — No. 75552 — Exp. 6-30-12 — CIVIL — STATE OF CALIFORNIA

NOTES:

1. (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
2. EXACT LIMITS OF COLD PLANE AC PAVEMENT TO BE DETERMINED IN FIELD BY THE ENGINEER.
3. EXACT CONCRETE SLAB LOCATIONS TO BE DETERMINED BY THE ENGINEER.
4. * - TOTAL INCLUDED IN ROADWAY ITEMS TABLE.

COLD PLANE AC PAVEMENT, HMA (TYPE A) (RAMP CONFORM TAPERS)

PM	LOCATION	LENGTH (N)	Ave WIDTH (N)	DEPTH (N)	COLD PLANE AC Pvmt	HMA (TYPE A)
					SQYD	TON
29.49	NB OFF-RAMP TO ROUTE 99/12	30′	63′	0.25′	210	34
29.49	SB ON-RAMP TO ROUTE 99/12	30′	56′	0.15′	187	30
29.50	NB ON-RAMP TO ROUTE 99/12	30′	63′	0.25′	210	34
29.50	SB OFF-RAMP TO ROUTE 99/12	30′	56′	0.25′	187	18
				TOTAL	794 *	116 *

COLD PLANE AC PAVEMENT, HMA (TYPE A) (SHOULDERS)

PM/PM	LOCATION	LENGTH (N)	WIDTH (N)	DEPTH (N)	COLD PLANE AC Pvmt	HMA (TYPE A)
		LF	LF	LF	SQYD	TON
29.0/30.75	NB Rt SHOULDER	9240.00	8.00	0.15	8,214	1102
29.0/29.03	NB Lt SHOULDER	158.40	5.00	0.15	88	9
29.5/30.75	NB Lt SHOULDER	6600.00	5.00	0.15	3,667	352
				TOTAL	11,969 *	1463 *

COLD PLANE AC PAVEMENT, HMA (TYPE A) (RAMPS)

PM/PM	LOCATION	LENGTH (N)	WIDTH (N)	DEPTH (N)	COLD PLANE AC Pvmt	HMA (TYPE A)
		LF	LF	LF	SQYD	TON
29.28/29.49	NB OFF-RAMP TO ROUTE 99/12	1130	37	0.25	4,650	743
29.31/29.49	SB ON-RAMP ROUTE 99/12	1587	23	0.25	4,056	648
29.50/29.73	NB ON-RAMP ROUTE 99/12	1230	29	0.25	3,964	633
29.50/29.80	SB OFF-RAMP ROUTE 99/12	1587	23	0.15	4,056	389
				TOTAL	16,726*	2413*

NOTE: SOUTHBOUND OFF-RAMP PAVEMENT WIDTH DOES NOT INCLUDE OUTSIDE SHOULDER

ROUTE 99/12 ROADSIDE GORE AREA

PM/PM	LOCATION	LENGTH (N)	WIDTH (N)	DEPTH (N)	MINOR CONCRETE (TEXTURED PAVING)	AGGREGATE BASE CLASS 2
		LF	LF	LF	SQFT	CY
29.28/29.49	NB OFF-RAMP TO ROUTE 99/12	264	18	0.50	2376	44
29.31/29.49	SB ON-RAMP ROUTE 99/12	264	18	0.50	2376	44
				TOTAL	4752	88

HMA DIKE

LOCATION	REMOVE AC DIKE	PLACE HMA DIKE (TYPE E)	PLACE HMA DIKE (TYPE F)	PLACE HMA DIKE (TYPE A)	HMA (TYPE A)
PM TO PM	LF	LF	LF	LF	TON
29.03 - 29.07	158.40	158.40			4
29.03 - 29.07	211.20		211.20		3
29.07 - 29.35	1,478.40	1478.40			37
29.31 - 29.49 (SB ON-RAMP ROUTE 99/12)	950.40		950.40		24
29.33 - 29.49 (NB OFF-RAMP ROUTE 99/12)	844.80		844.80		21
29.37 - 29.38	52.80		52.80		1
29.43 - 29.48	264.00	264.00			7
29.48 - 29.56	422.40		422.40		5
29.50 - 29.66 (NB ON-RAMP ROUTE 99/12)	844.80		844.80		21
29.59 - 29.69	528.00	528.00			13
29.91 - 30.35	2,323.00		2323.00		30
30.35 - 30.56	1,108.80	1108.80			28
30.56 - 30.58	105.60		105.60		1
30.58 - 30.75	897.60			897.60	23
TOTAL	10,190.40	3537.60	5755.20	897.60	218*

NOTE: SOUTHBOUND OFF-RAMP ROUTE 99/12 EXISTING DIKE REMAINS IN PLACE.

CONCRETE PAVEMENT ITEMS

LOCATION	LENGTH (N)	WIDTH (N)	DEPTH (N)	INDIVIDUAL SLAB REPLACEMENT	DOWEL BAR (DRILL & BOND)
	LF	LF	LF	CY	LF
LANE No. 1	920	12	1	409	1380
LANE No. 2	2900	12	1	1289	4350
			TOTAL	1698	5730

SUMMARY OF QUANTITIES

Q-1

REVISED BY | DATE REVISED

PERCY MARAGOS | JOSE HUERTA

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

06-DESIGN

Caltrans®

LAST REVISION 06-13-11 | DATE PLOTTED => 03-AUG-2011 | TIME PLOTTED => 10:53

BORDER LAST REVISED 7/2/2010

USERNAME => s113541

DGN FILE => a0v870pa001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1457

PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	16	40

REGISTERED CIVIL ENGINEER — DATE: 6-07-11

MARY J. STEVENS No. 75552 Exp. 6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

6-13-11
PLANS APPROVAL DATE

RUMBLE STRIP

PM/PM	SHOULDER	STATION
29.0/30.75	INSIDE	93
29.0/30.75	OUTSIDE	93
	TOTAL	186

CRACK TREATMENT

PM/PM	LENGTH (N) MILES	No. OF LANES (N)	CRACK TREATMENT LANE MILE
29.0/30.75	1.75	2	3.50

ROADWAY ITEMS

LOCATION	HMA (TYPE A)	TACK COAT	GRIND EXISTING CONCRETE PAVEMENT	COLD PLANE AC PAVEMENT
	TON		SQYD	
PM 29.0/30.75 (Shld TRAVEL LANES)	1463	5		11,969
RAMP CONFORM TAPERS	116	1		794
RAMPS	2413	7		16,726
HMA DIKE	218			
NB TRAVEL WAY			26,961	
TOTAL	4210	13	26,961	29,489

SUMMARY OF QUANTITIES

Q-2

PERCY MARAGOS — CALCULATED-DESIGNED BY
JOSE HUERTA — CHECKED BY
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: JOSE HUERTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-DESIGN

LAST REVISION | DATE PLOTTED => 28-JUN-2011
06-13-11 | TIME PLOTTED => 13:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	17	40

REGISTERED CIVIL ENGINEER — DATE: 6-07-11

MARY J. STEVENS No. 75552 Exp. 6-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

6-13-11
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

METAL BEAM GUARD RAILING

LOCATION - PM TO PM	DIRECTION	SIDE	REMOVE MBGR	MBGR	DOUBLE MBGR	LAYOUT TYPE	CONCRETE BARRIER (TYPE 60)	MINOR CONCRETE MINOR STRUCTURE	SINGLE THRIE BEAM (WOOD POST)	ALTERNATIVE CRASH CUSHION SYSTEM	RAIL TENSIONING ASSEMBLY	TRANSITION RAILING (TYPE WB)	ALTERNATIVE FLARED TERMINAL SYSTEM	BURIED POST END ANCHOR (N)	DELINEATOR (CLASS 2)	OBJECT MARKER (TYPE L-1)	REMOVE CRASH CUSHION (SAND FILLED)	END ANCHOR ASSEMBLY (TYPE SFT)
			LF	LF	LF	(N)	LF	CY	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
Rte 99/12 SEPARATION - 29.42 TO 29.49 (Br No. 29-140R)	NB	Rt	437.5	375		12B		0.65				1	1		3	1		
Rte 99/12 SEPARATION - 29.48 TO 29.49 (Br No. 29-140R)	NB	Lt	100			12E		0.65		1	1	1			3	1		
EAST LODI UP/LODI Ave OC - 30.49 TO 30.54 (Br No. 29-148/159)	NB	Rt	187.5	88.9		12C	99		48			2	1	1	3	1		
EAST LODI UP/LODI Ave OC - 30.49 TO 30.54 (Br No. 29-148/159)	NB	Lt	400	50	25	14A		0.65	112.5	1	1				3	1	1	1
EAST PINE OC - 30.72 TO 30.74 (Br No. 29-0149)	NB	Rt	112.5	75		12C	54.5					1		1	3	1		
EAST PINE OC - 30.72 TO 30.74 (Br No. 29-0149)	NB	Lt	225	50	25	14A			50	1	1				3	1	1	1
TOTAL			1462.5	638.9	50		153.5	1.95	210.5	3	3	5	2	2	18	6	2	2

SUMMARY OF QUANTITIES

Q-3

CALCULATED-DESIGNED BY: PERCY MARAGOS
CHECKED BY: JOSE HUERTA
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: JOSE HUERTA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-DESIGN

LAST REVISION 06-13-11 | DATE PLOTTED => 28-JUN-2011 | TIME PLOTTED => 13:44

BORDER LAST REVISED 7/2/2010 | USERNAME => s113541 | DGN FILE => a0v870pa003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1457 | PROJECT NUMBER & PHASE 10000204251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	18	40

Paul Matos 06-13-11
REGISTERED ELECTRICAL ENGINEER

6-13-11
PLANS APPROVAL DATE

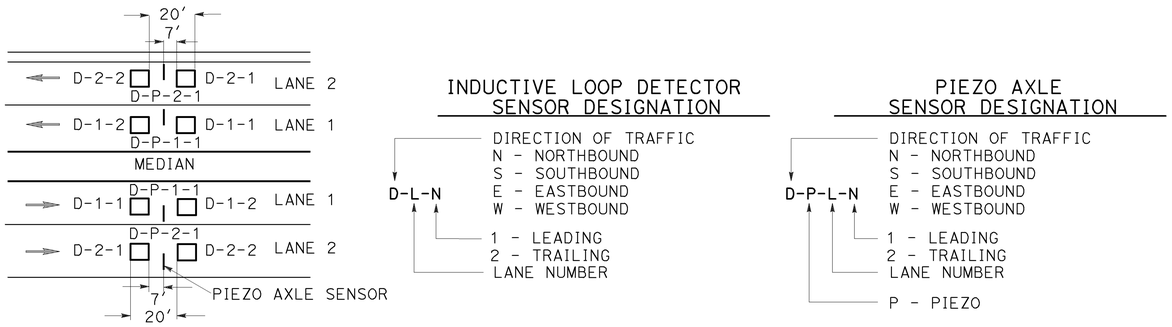
REGISTERED PROFESSIONAL ENGINEER — PAUL MATOS No. 18757 Exp. 6/30/13 ELECTRICAL — STATE OF CALIFORNIA

LEGEND: (FOR SHEETS E-1 AND E-2)

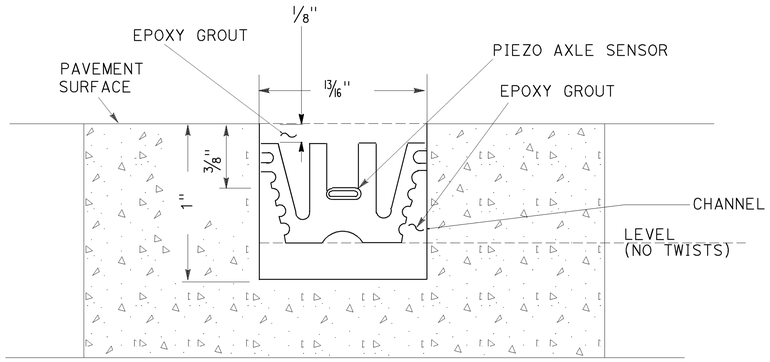
1. Exist TYPE III-AF SERVICE EQUIPMENT ENCLOSURE.
2. SEE DETAIL A ON THIS SHEET FOR DETECTOR LOOP AND PIEZO AXLE SENSOR DESIGNATION. SEE DETAILS B AND C ON THIS SHEET FOR PIEZO AXLE SENSOR INSTALLATION.
3. TO OTHER PORTIONS OF THE SYSTEM NOT SHOWN.
4. SEE DETAIL E ON THIS SHEET FOR DETECTOR LOOP DESIGNATION.
5. SEE DETAIL D ON THIS SHEET FOR DETECTOR LOOP WINDING AND SPLICING PROCEDURE.
6. AB Exist DETECTOR LOOPS.
7. Exist MODEL 334 CABINET. FURNISH AND INSTALL AUTOMATED TRAFFIC COUNTER.

ABBREVIATIONS:

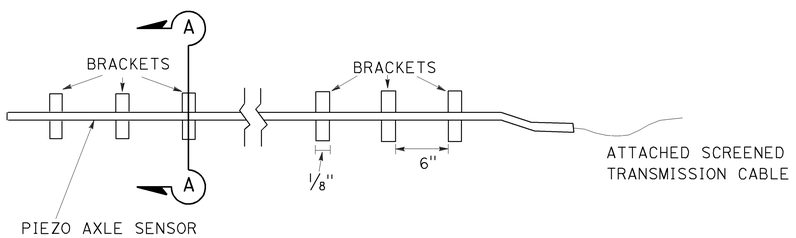
VCS VEHICLE CLASSIFICATION STATION
STC SCREENED TRANSMISSION CABLE



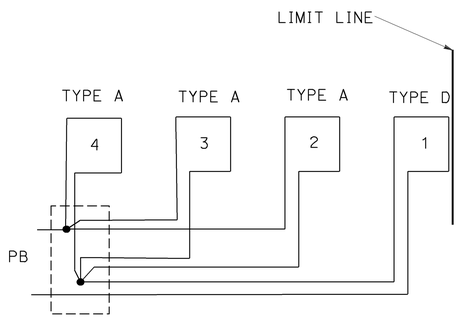
TYPICAL INDUCTIVE LOOP DETECTOR SENSOR AND PIEZO AXLE SENSOR DESIGNATION DETAIL A



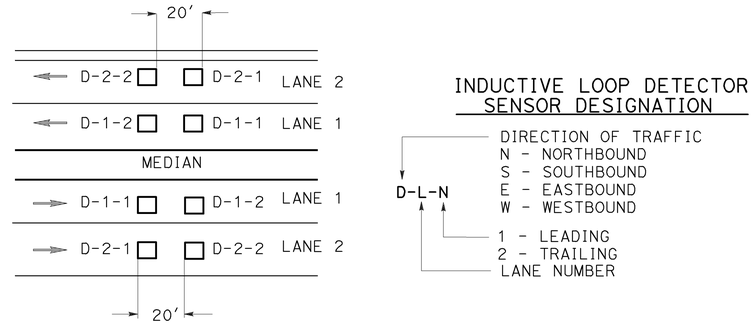
SECTION A-A PIEZO AXLE SENSOR INSTALLATION DETAIL B



PIEZO AXLE SENSOR INSTALLATION DETAIL C



DETECTOR LOOP SPLICING DETAIL D



TYPICAL INDUCTIVE LOOP DETECTOR SENSOR DESIGNATION DETAIL E

DETECTOR LOOP MODIFY VEHICLE CLASSIFICATION STATION

NO SCALE

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

PAUL MATOS | OMAR MENDOZA | REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 29-JUN-2011 | TIME PLOTTED => 14:17
06-13-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	19	40

Paul Matos 06-13-11
REGISTERED ELECTRICAL ENGINEER

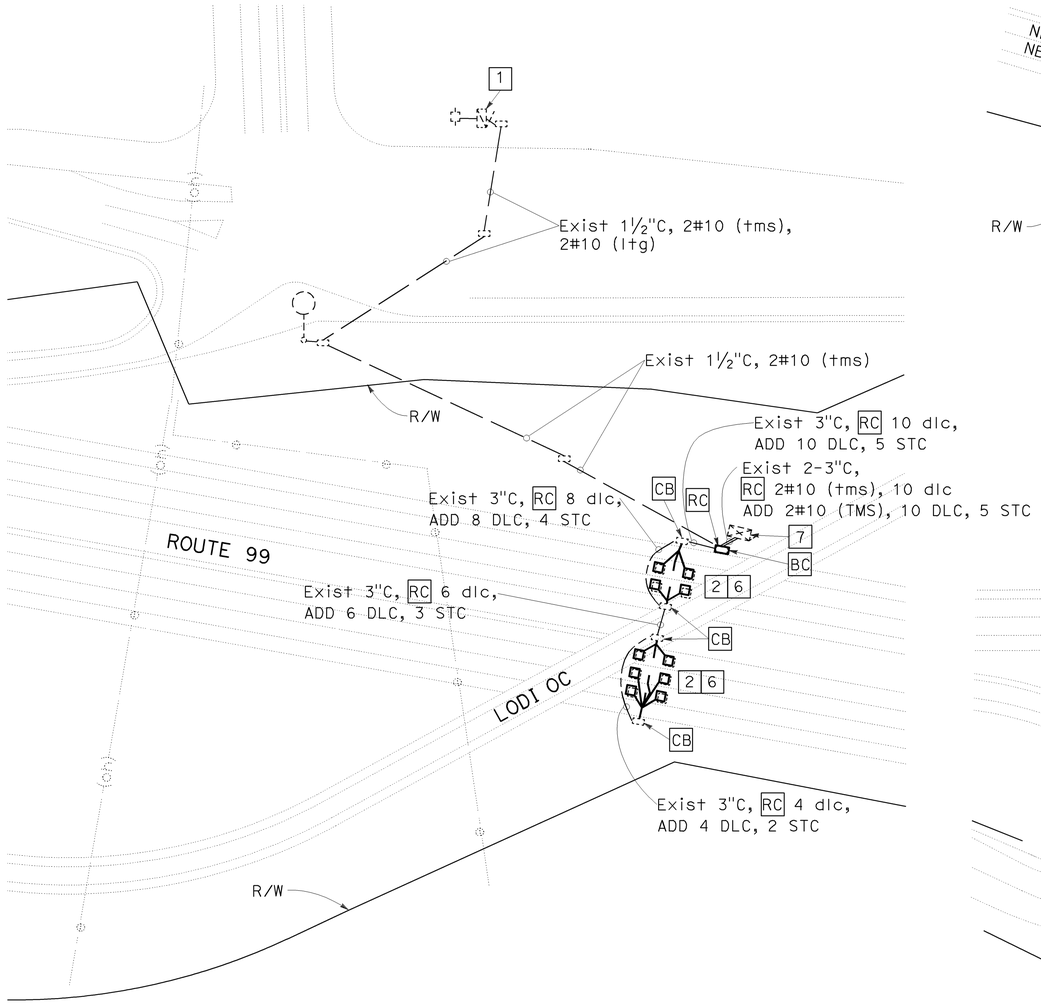
PAUL MATOS No. 18757 Exp. 6/30/13 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

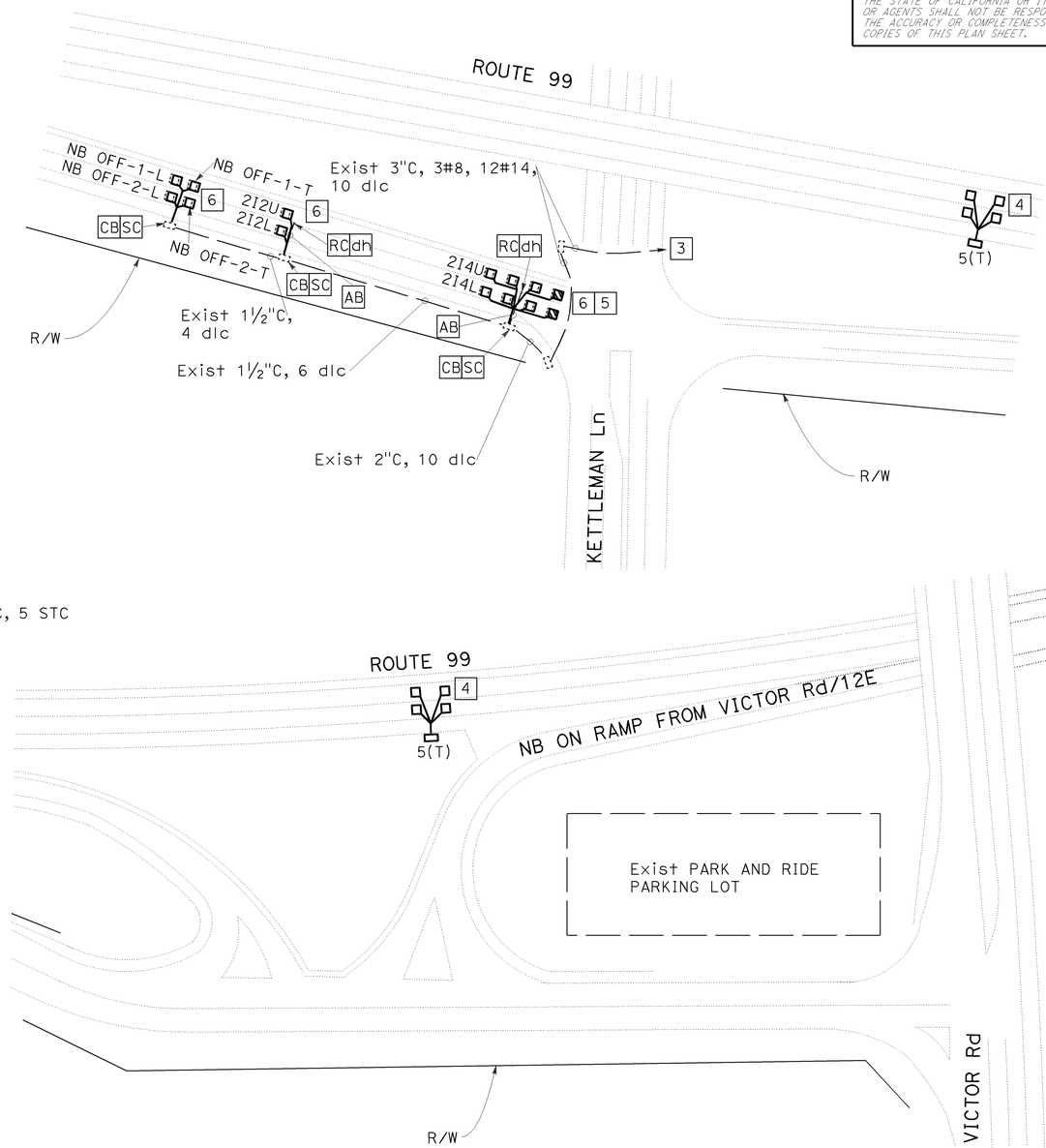
6-13-11
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR NOTES SEE SHEET E-1.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.





DETECTOR LOOP
MODIFY VEHICLE CLASSIFICATION STATION

SCALE: 1" = 50′ **E-2**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

PAUL MATOS — CALCULATED-DESIGNED BY
OMAR MENDOZA — CHECKED BY
REVISED BY — DATE REVISED
FUNCTIONAL SUPERVISOR — ALI BAKHDOUD
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® 06-ELECTRICAL DESIGN

LAST REVISION DATE PLOTTED => 29-JUN-2011
06-13-11 TIME PLOTTED => 14:17

BORDER LAST REVISED 7/2/2010
USERNAME => s113541
DGN FILE => a0v870ua002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1515
PROJECT NUMBER & PHASE 10000204251

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	20	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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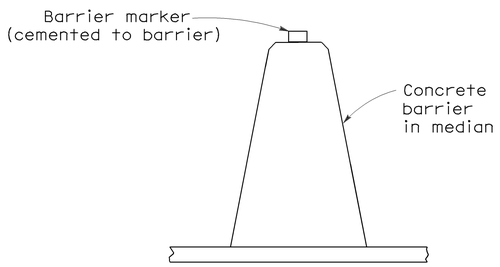
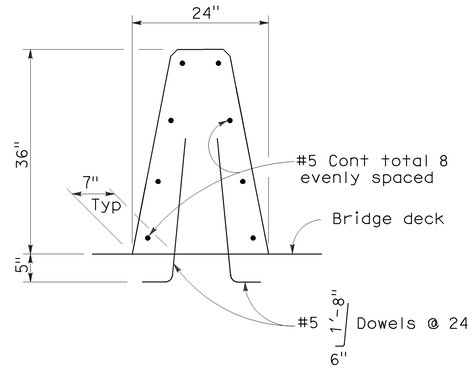
To accompany plans dated 6-13-11



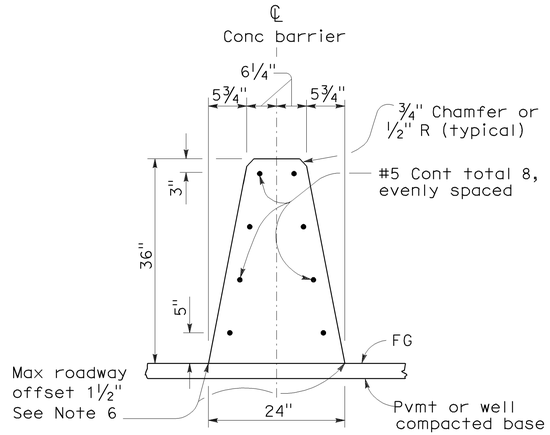
CONCRETE BARRIER TYPE 60 DELINEATION

See Notes 7 and 8



CONCRETE BARRIER TYPE 60A

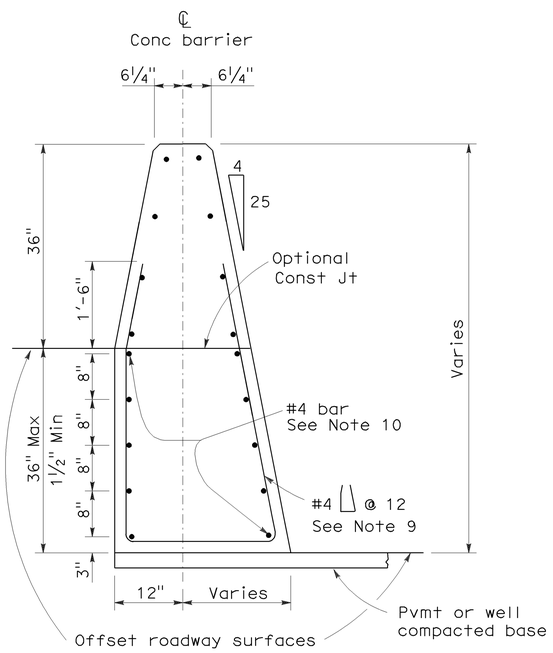
Details similar to Type 60 except as noted.



CONCRETE BARRIER TYPE 60

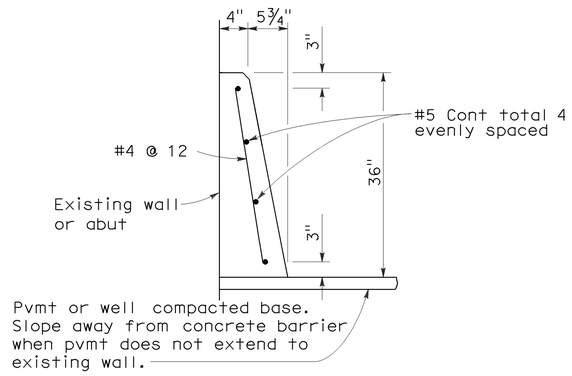
NOTES:

1. See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
2. See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
3. Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
4. Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
5. Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or ½" minimum.
6. Where roadway offset is greater than 1½", see Concrete Barrier Type 60C.
7. Barrier delineation to be used when required by the Special Provisions.
8. Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
9. Reinforcing stirrup not required for roadway offsets less than 1'-0".
10. For roadway surfaces offset greater than 1½" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C

Details similar to Type 60 except as noted.
Concrete barrier end anchor when necessary.
36" roadway surfaces offset shown.



CONCRETE BARRIER TYPE 60D

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 60

NO SCALE

RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A
DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

2006 REVISED STANDARD PLAN RSP A76A

5-21-08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	21	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Randell D. Hiatt — No. C50200 — Exp. 6-30-11 — CIVIL — STATE OF CALIFORNIA

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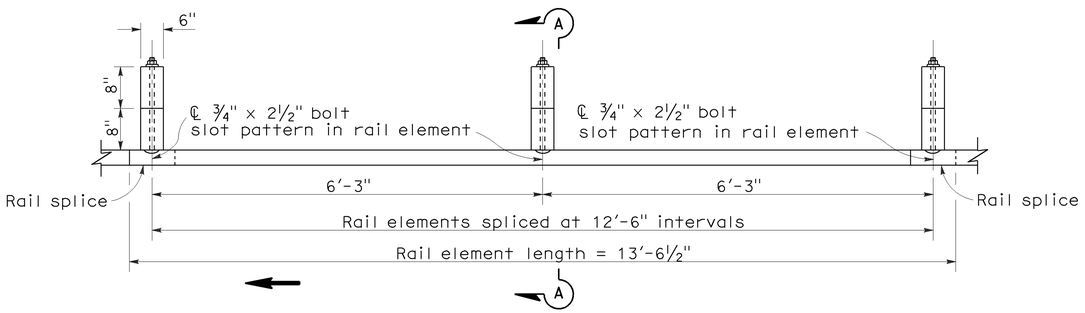
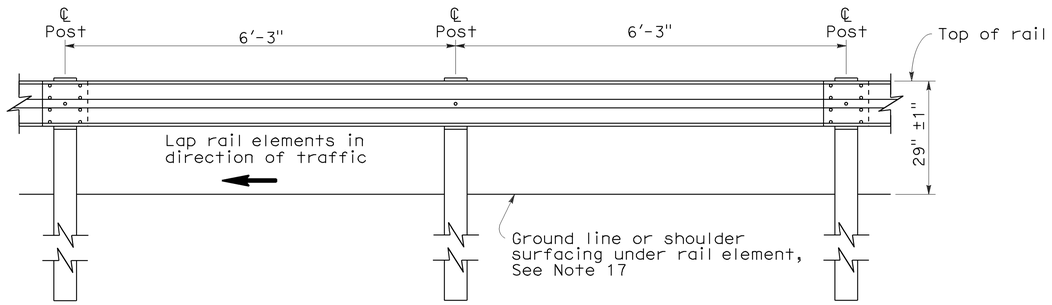
To accompany plans dated 6-13-11

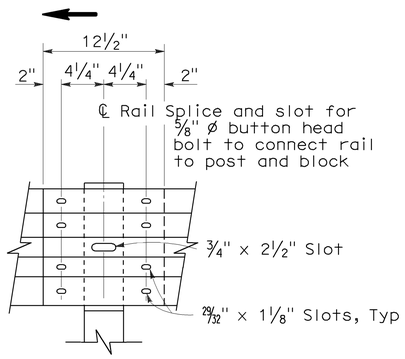


PLAN



ELEVATION

METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS



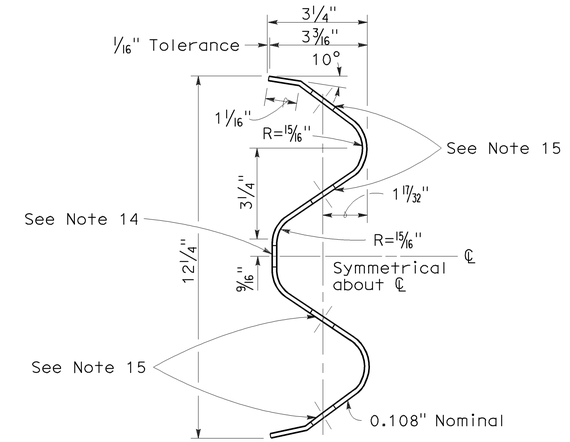
ELEVATION

RAIL ELEMENT SPLICE DETAIL

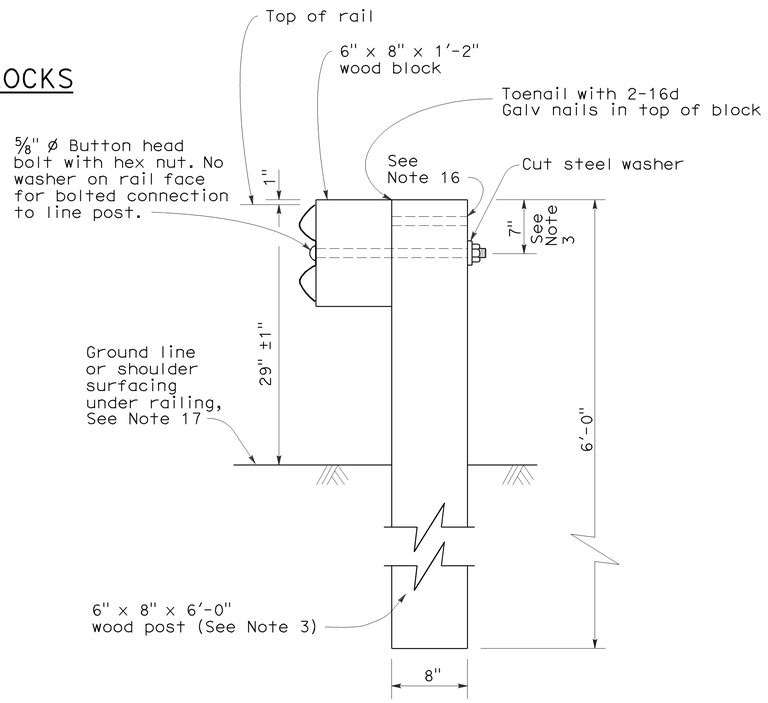
a) Connect the over lapped end of the rail elements with ⅝" ø x 1⅜" button head oval shoulder splice bolts inserted into the 29/32" x 1⅛" slots and bolted together with ⅝" ø recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.

b) The ends of the rail elements are to be overlapped in the direction of traffic (see details).

c) Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



SECTION A-A
TYPICAL WOOD LINE POST INSTALLATION
See Note 4

NOTES:

1. For details of steel post installations, see Standard Plan A77A2.
2. For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
3. For details of wood posts and wood blocks used to construct guard railing, see Standard Plan A77C1.
4. For additional installation details, see Standard Plan A77C3.
5. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
6. For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
7. For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
8. For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
9. For details of guard railing transition to bridge railing, see Standard Plan A77J4.
10. For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
11. For guard railing connection details to abutments and walls, see Standard Plan A77J3.
12. Direction of adjacent traffic indicated by →.
13. For typical guard railing delineation and dike positioning details, see Standard Plan A77C4.
14. Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
15. Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
16. Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77C1.
17. Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING STANDARD RAILING SECTION (WOOD POST WITH WOOD BLOCK)

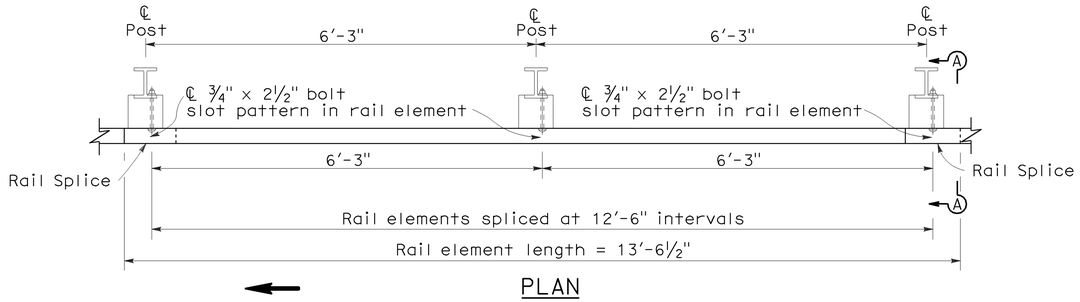
NO SCALE

RSP A77A1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A1 DATED MAY 1, 2006 - PAGE 41 OF THE STANDARD PLANS BOOK DATED MAY 2006.

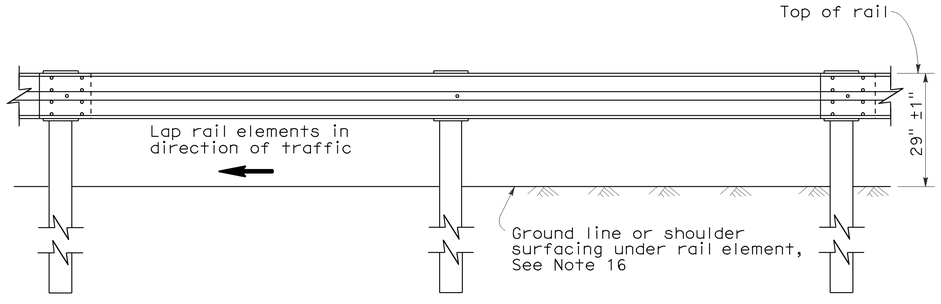
REVISED STANDARD PLAN RSP A77A1

2006 REVISED STANDARD PLAN RSP A77A1

3-10-11



PLAN



ELEVATION

METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS

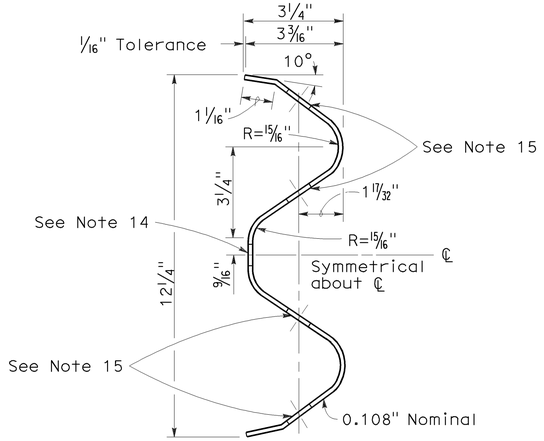
ELEVATION

RAIL ELEMENT SPLICE DETAIL

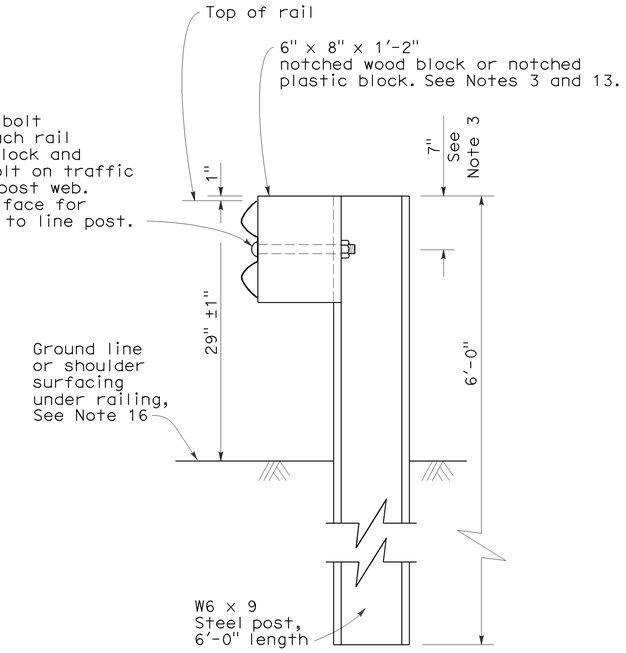
a) Connect the over lapped end of the rail elements with ⅝" ø x 1⅜" button head oval shoulder splice bolts inserted into the 29/32" x 1⅛" slots and bolted together with ⅝" ø recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.

b) The ends of the rail elements are to be overlapped in the direction of traffic (see details).

c) Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



SECTION A-A

TYPICAL STEEL LINE POST INSTALLATION

See Note 4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	22	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Randell D. Hiatt — No. C50200 — Exp. 6-30-11 — CIVIL — STATE OF CALIFORNIA

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To accompany plans dated 6-13-11

NOTES:

1. For details of wood post installations, see Standard Plan A77A1.
2. For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
3. For details of steel posts and notched wood blocks used to construct guard railing, see Standard Plan A77C2.
4. For additional installation details, see Standard Plan A77C3.
5. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
6. For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
7. For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
8. For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
9. For details of guard railing transition to bridge railing, see Standard Plan A77J4.
10. For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
11. For dike positioning and guard railing delineation details, see Standard Plan A77C4.
12. Direction of adjacent traffic indicated by → .
13. Notched face of block faces steel post.
14. Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
15. Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
16. Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING STANDARD RAILING SECTION (STEEL POST WITH NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCK)

NO SCALE

RSP A77A2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A2 DATED MAY 1, 2006 - PAGE 42 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A2

2006 REVISED STANDARD PLAN RSP A77A2

5-4-11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	23	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Randell D. Hiatt — No. C50200 — Exp. 6-30-09 — CIVIL — STATE OF CALIFORNIA

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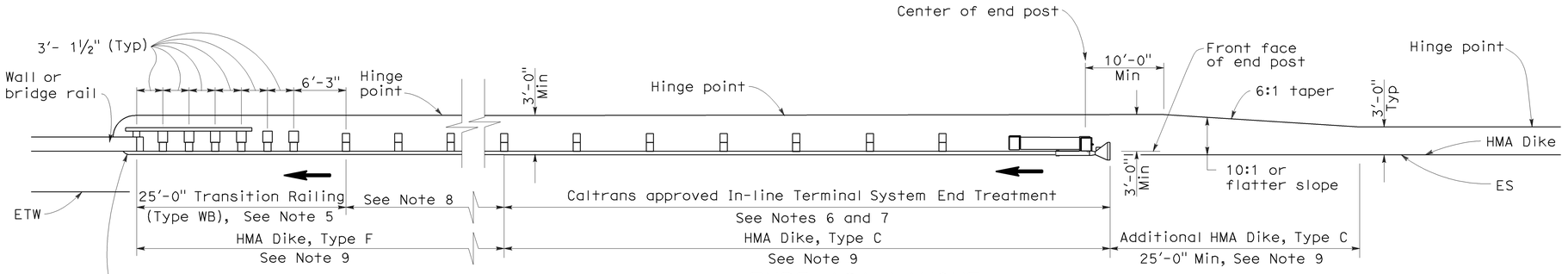
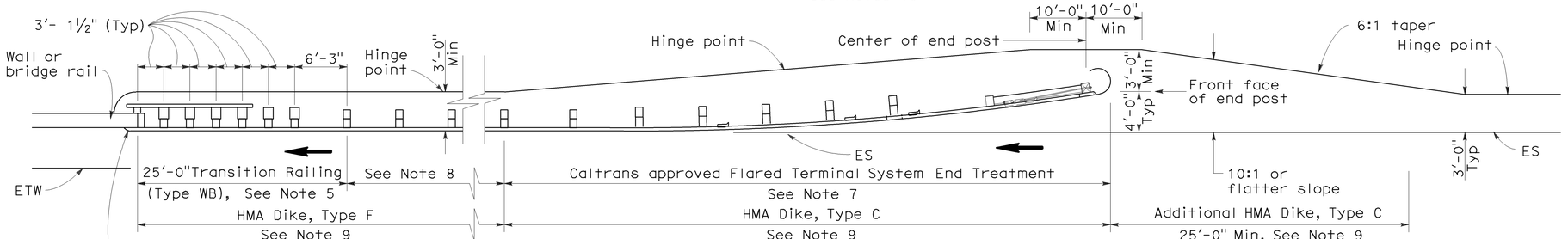
To accompany plans dated 6-13-11



TYPE 12A LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10



TYPE 12B LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10

NOTES:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. Direction of adjacent traffic indicated by ➔.
5. For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
6. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system end treatment to be used will be shown on the Project Plans.
8. Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.
9. Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
10. Type 12A or Type 12B Layouts are typically used:
    a. To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
    b. To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
    c. To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
    d. To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
11. See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
12. For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
13. For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR STRUCTURE APPROACH

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F1

2006 REVISED STANDARD PLAN RSP A77F1

12-10-07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	24	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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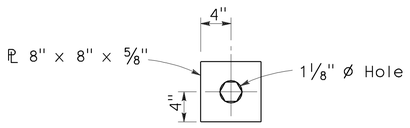
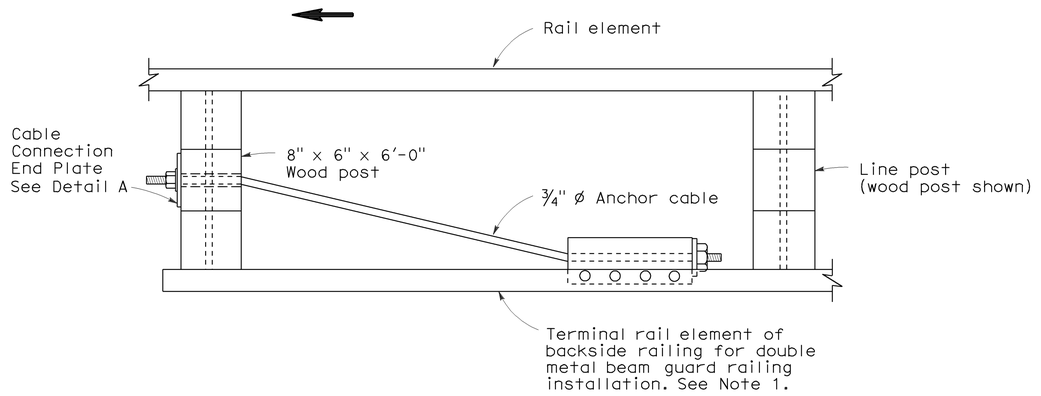
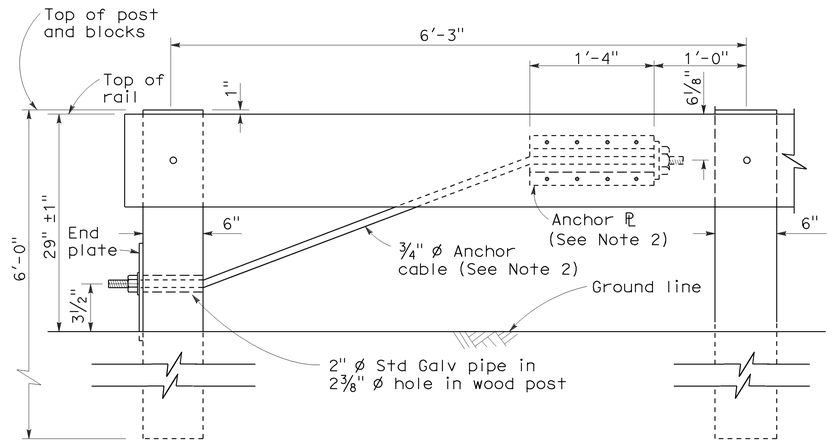
To accompany plans dated 6-13-11



DETAIL A
CABLE CONNECTION
END PLATE



PLAN



ELEVATION
RAIL TENSIONING
ASSEMBLY
See Note 1

NOTES:

1. See Standard Plan A77F3 and Standard Plan A77G1 for typical use of rail tensioning assembly.
2. For details of the anchor plate and 3/4" cable, see Standard Plan A77H3.
3. Direction of traffic indicated by ➡.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL RAILING
RAIL TENSIONING ASSEMBLY

NO SCALE

RSP A77H2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H2
DATED MAY 1, 2006 - PAGE 68 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77H2

2006 REVISED STANDARD PLAN RSP A77H2

3-10-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	25	40

To accompany plans dated 6-13-11

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Randell D. Hiatt — No. C50200 — Exp. 6-30-11 — CIVIL — STATE OF CALIFORNIA

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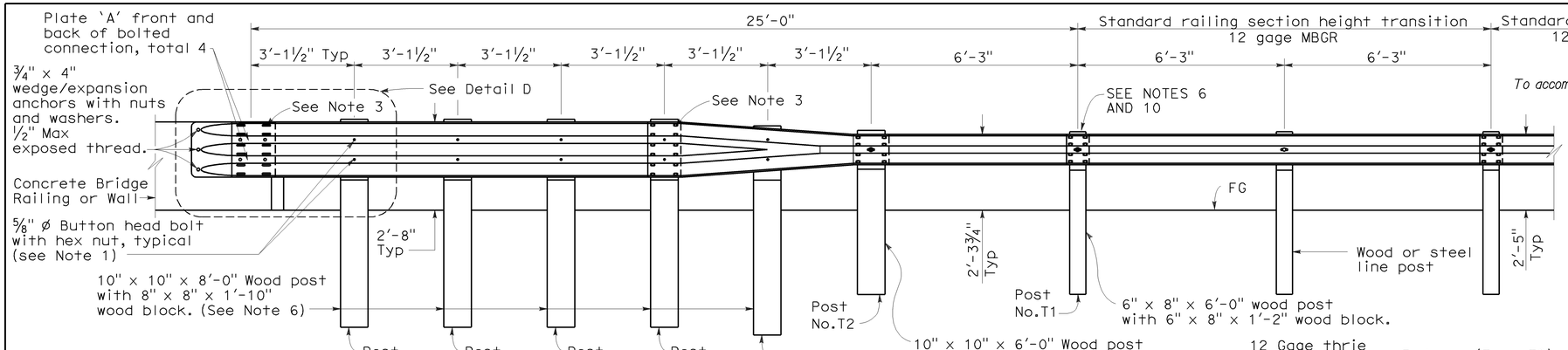
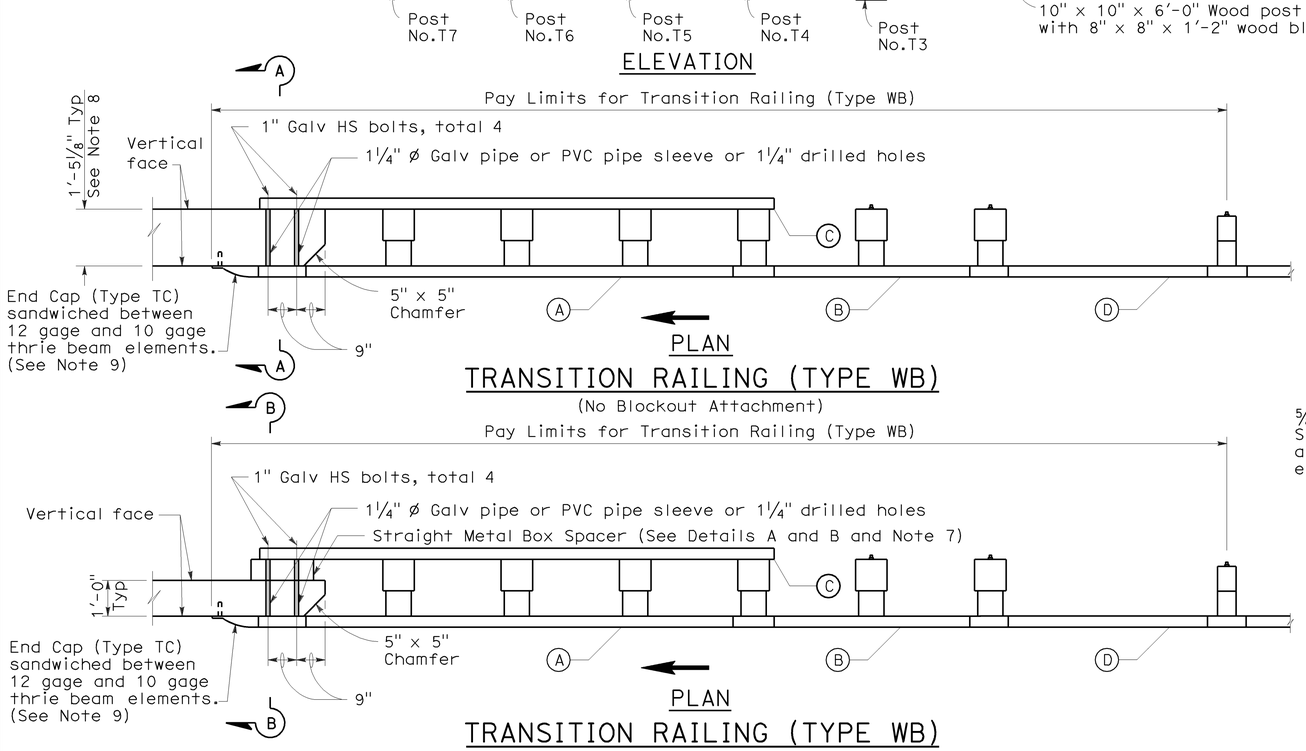


ELEVATION



PLAN

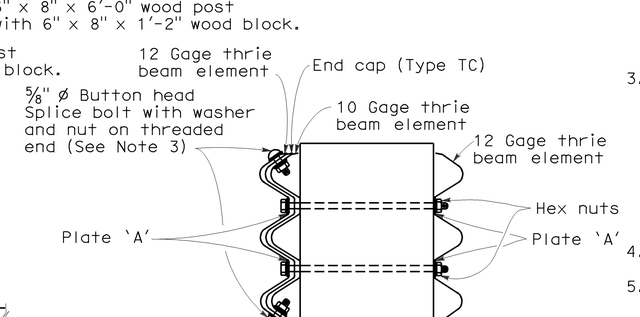
TRANSITION RAILING (TYPE WB)

(No Blockout Attachment)

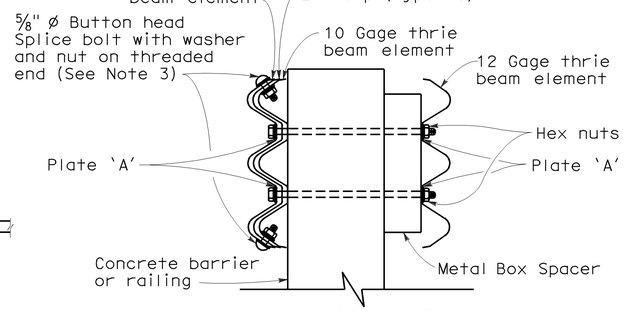
PLAN

TRANSITION RAILING (TYPE WB)

(Blockout Attachment)



SECTION A-A



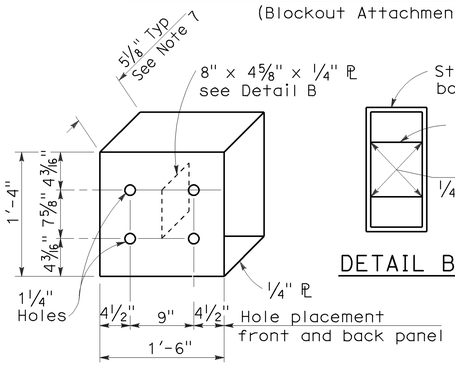
SECTION B-B

LEGEND

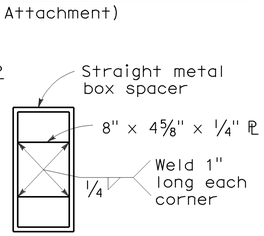
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
- (B) One 10 gage "W" beam to thrie beam element.
- (C) One 12 gage thrie beam element.
- (D) One 10 gage "W" beam rail element (7'-3½" length)

10 gage = 0.135" thick

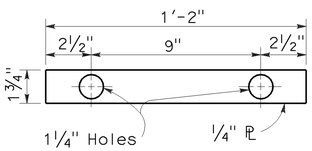
12 gage = 0.108" thick



DETAIL A



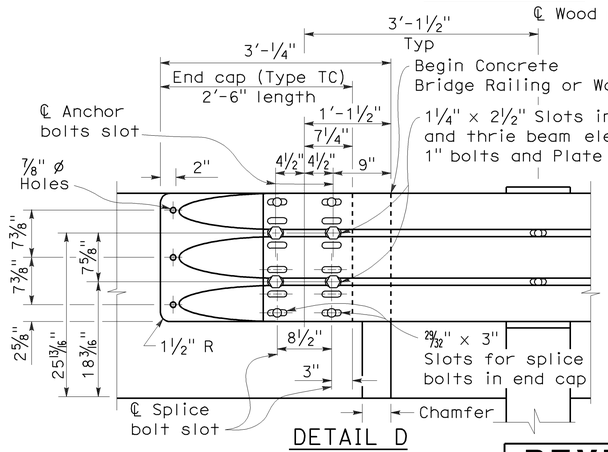
DETAIL B



DETAIL C

STRAIGHT METAL BOX SPACER

PLATE 'A'



DETAIL D

NOTES:

1. Use ⅝" ø Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
2. The nested rail elements, end cap, and 'W' beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
3. Exterior splice bolt holes for rail element splices at Post No. T4 and the connection to the concrete barrier or railing shall be the standard 29/32" x 1⅛" slot size. Interior splice bolt holes at these locations may be increased up to 1¼" ø. Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No. T4 and the connection to the concrete barrier or railing.
4. Direction of adjacent traffic indicated by ➡.
5. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
6. Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing with height transition ratio of 120:1 or an approved Caltrans end treatment attached to Post No. T1.
7. The depth of the metal box spacer varies from the 5⅛" to 1½" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 17⅞". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1½", metal plates similar to Plate 'A' are to be used as spacers.
8. Where the width of the concrete railing or wall is greater than 17⅞", wood blocks are to be used to fill the space created between the backside of Posts No. T4 through No. T7 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
9. End cap may be installed over 12 gage and 10 gage thrie beam elements where transition railing is installed on the departure end of bridge railing.
10. Conform standard railing section height to 2'-3¾" at Post No. T1 using height transition ratio of 120:1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TRANSITION RAILING (TYPE WB)

NO SCALE

RSP A77J4 DATED MAY 20, 2011 SUPERSEDES
RSP A77J4 DATED JUNE 5, 2009, RSP A77J4 DATED JUNE 6, 2008
AND STANDARD PLAN A77J4 DATED MAY 1, 2006 -
PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77J4

2006 REVISED STANDARD PLAN RSP A77J4

5-14-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	26	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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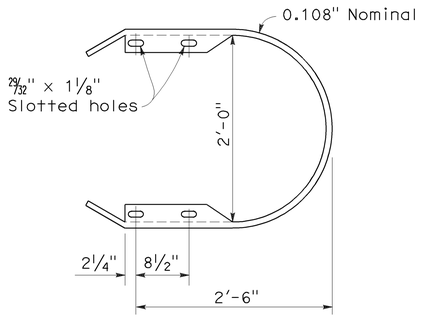
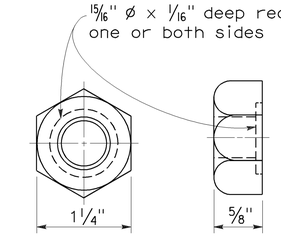
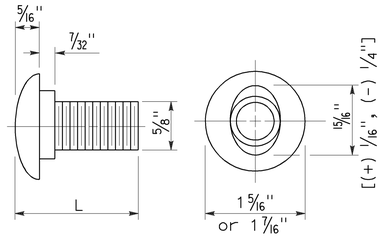
To accompany plans dated 6-13-11



RETURN CAP
(TYPE TA)

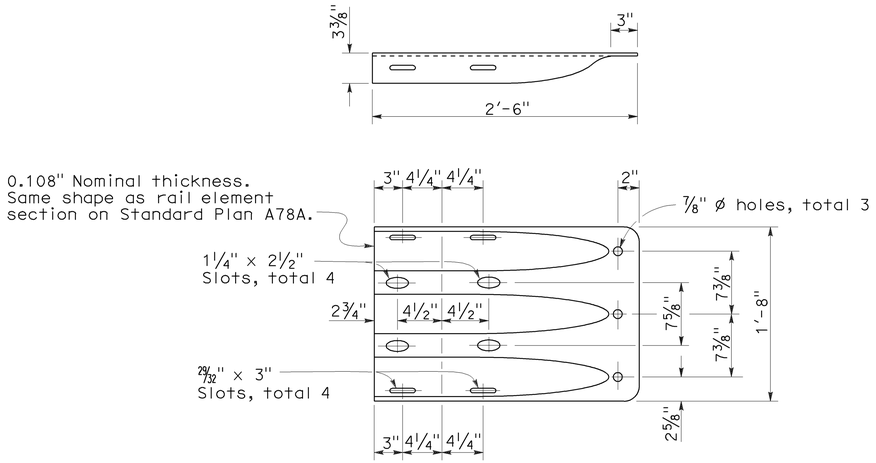


5/8" ø RECESS NUT



5/8" ø BUTTON HEAD BOLT

L	THREAD LENGTH
1 1/4"	full thread length
2"	full thread length
9 1/2"	4" Min thread length
18"	4" Min thread length



END CAP
(TYPE TC)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

THRIE BEAM BARRIER
STANDARD HARDWARE DETAILS

NO SCALE

RSP A78C1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78C1
DATED MAY 1, 2006 - PAGE 85 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A78C1

2006 REVISED STANDARD PLAN RSP A78C1

4-21-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	27	40

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Jeffery G. McRae — No. E14512 — Exp. 6-30-08 — ELECTRICAL — STATE OF CALIFORNIA

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To accompany plans dated 6-13-11

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
3. Variations noted adjacent to symbol on project plans.

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

- AB — Abandon. If applied to conduit, remove conductors.
- BC — Install pull box in existing conduit run.
- BP — Pedestrian barricade, type as indicated on plan.
- CB — Install conduit into existing pull box.
- CC — Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF — Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH — Detector handhole.
- FA — Foundation to be abandoned.
- IS — Install sign on signal mast arm.
- NS — No slip base on standard.
- PEC — Photoelectric control.
- PEU — Photoelectric unit.
- RC — Equipment or material to be removed and become the property of the Contractor.
- RE — Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL — Relocate equipment.
- RR — Remove and reuse equipment.
- RS — Remove and salvage equipment.
- SC — Splice new to existing conductors.
- SD — Service disconnect.
- SF — Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP — Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED	EXISTING	
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces,
MAS-4B	mas-4B	side attachment - 4 signal section
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces,
MAS-5B	mas-5B	side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

SOFFIT AND WALL MOUNTED LUMINAIRES

Pendant, 70 W HPS unless otherwise specified.

Flush, 70 W HPS unless otherwise specified.

Wall surface, 70 W HPS unless otherwise specified.

Existing soffit or wall luminaire to remain unmodified.

Existing soffit or wall luminaire to be modified as specified.

NOTE:
Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A
DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	28	40

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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To accompany plans dated 6-13-11

CONDUIT

PROPOSED	EXISTING	
— — —	— — —	Lighting Conduit, unless otherwise indicated or noted
— - — - —	— - — - —	Traffic signal conduit
—C— —	—c— —	Communication conduit
—T— —	—t— —	Telephone conduit
—F— —	—f— —	Fire alarm conduit
—FO— —	—fo— —	Fiber optic conduit
— — —]	— — —]	Conduit termination (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
—OH—	—oh—	Overhead lines
U	U	Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION

Type of installation

TYPE H SERVICE - 28'-10" ← Pole height above grade

ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
PV	PV	Modifications of basic symbols: "L" Indicates all non-arrow sections louvered "LG" Indicates louvered green section only "PV" Indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
R	Y	Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
●	○	Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

2006 REVISED STANDARD PLAN RSP ES-1B

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	29	40

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

October 5, 2007
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-13-11

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345 — Sign number - Place on post or structure

10 ISL SCI 1.0
- 1.0 — Transformer rating (kVA)
- SCI — Lighting control type
- ISL — Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"
- 15'-0" — Mast arm length, if shown. Do not place on standard or structure.
- 12345 — Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC
- 2#10, 15#14, 2 DLC — Number and size of conductors and cables
- 1½"C, — Size of conduit in inches

ø1, ø2, ø2P, etc. — Traffic phase identification for signal faces, detectors and phase diagrams

[1] [2] [3] — Project note numbers

(A) (B) (C) — Equipment description, installation or item numbers

△1 △2 △3 — Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100
- 100 — Wind velocity = 100 mph
- 3 — Case 3 arm loading
- 19A — Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
CMS	cms	Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
EMS	ems	Extinguishable message sign
M V	m v	Detection device M = Microwave sensor V = Video image sensor

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
3	9A(21)	Pull box-Additional designations or descriptions

3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

(C) = Communications pull box
(E) = Pull box with extension
(S) = Sprinkler control pull box
(21) = Anchor bolts and conduit for future installation of Type 21 Standard
(T) = Traffic pull box

VEHICLE DETECTORS

5 J 9 U
- Vehicle detector designation
- U = Upper, L = Lower
- Slot number in input file
- Input file (I or J)
- Phase

PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
DH	dh	Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

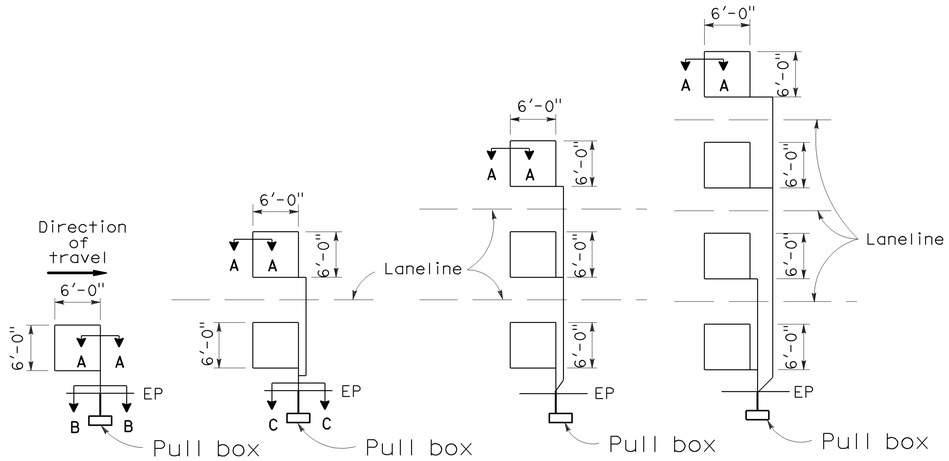
REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

7-10-07

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

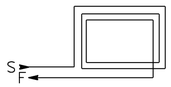


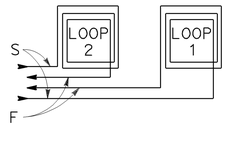
TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

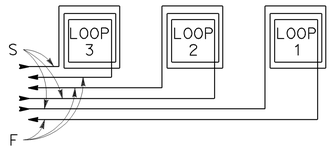
SAWCUT DETAILS

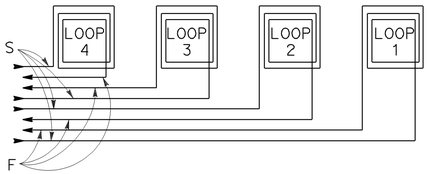
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane. (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



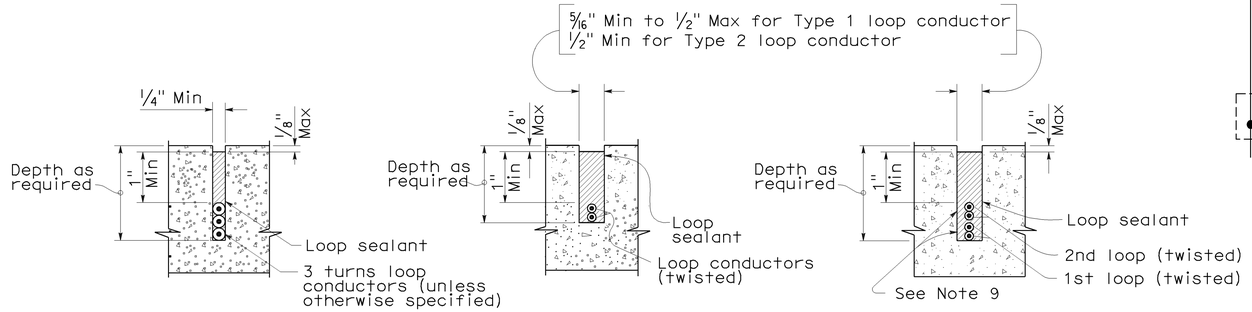






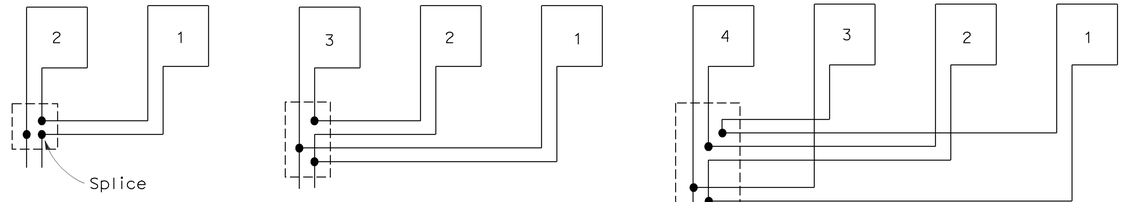
WINDING DETAILS

See Notes 6 and 7



SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	30	40

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Jeffery G. McRae — No. E14512 — Exp. 6-30-08 — ELECTRICAL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-13-11

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A
DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

8-17-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	31	40

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. C49042 — Exp. 9-30-10 CIVIL — STATE OF CALIFORNIA

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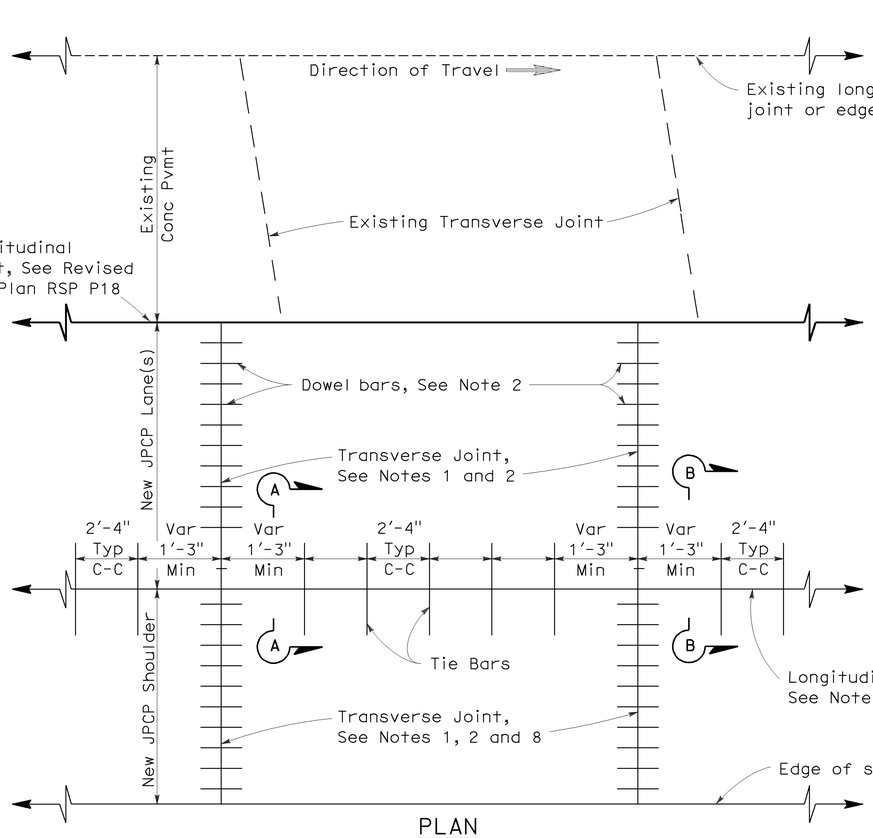
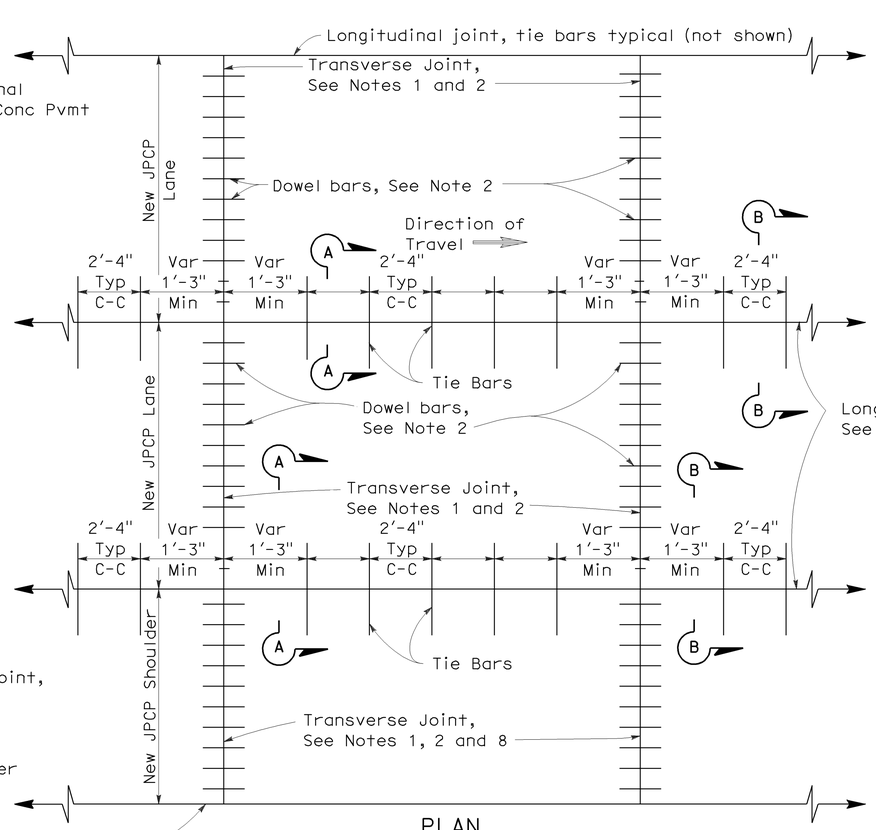
To accompany plans dated 6-13-11



PLAN

LANE/SHOULDER ADDITION OR RECONSTRUCTION

See Notes 6 and 7



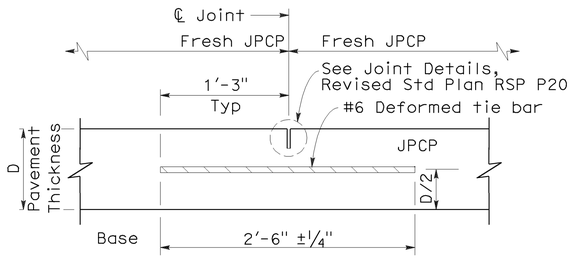
PLAN

NEW CONSTRUCTION

See Notes 6 and 7

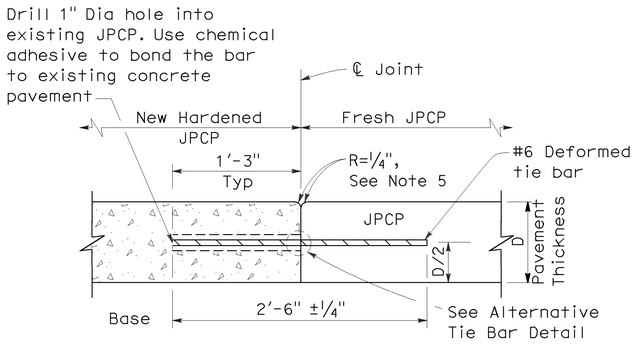
NOTES:

1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
6. Joint spacing patterns do not apply to intersections.
7. Details can also apply to inside widening.
8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



SECTION A-A

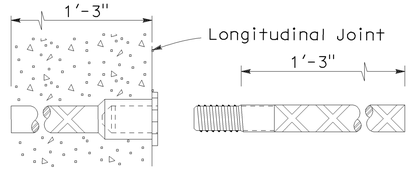
LONGITUDINAL CONTRACTION JOINT



SECTION B-B

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR DETAILS



ALTERNATIVE TIE BAR SPLICE DETAIL

(Splice Coupler)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

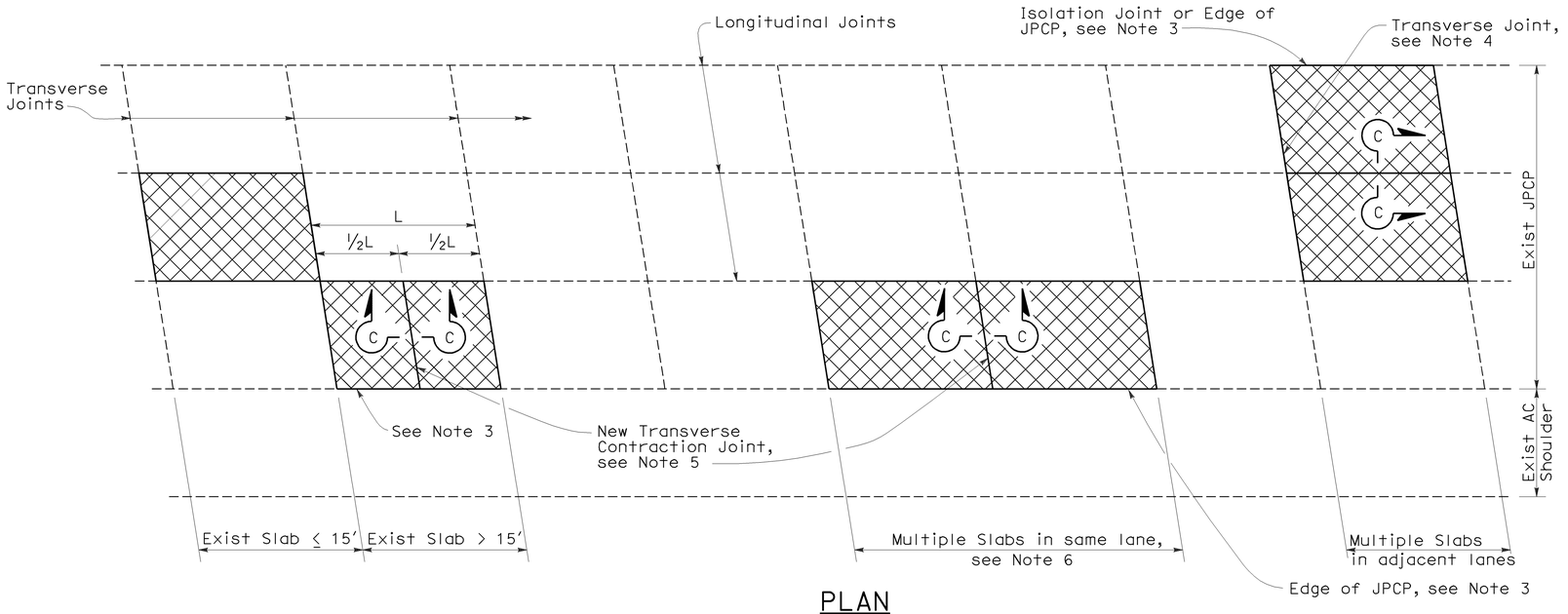
JOINTED PLAIN CONCRETE PAVEMENT

NO SCALE

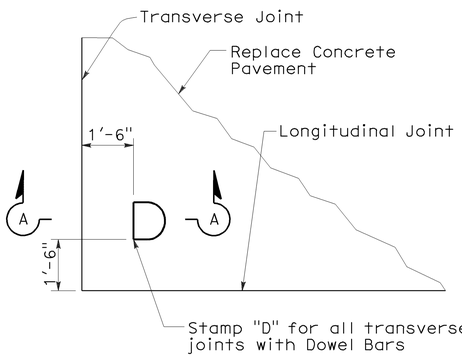
RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

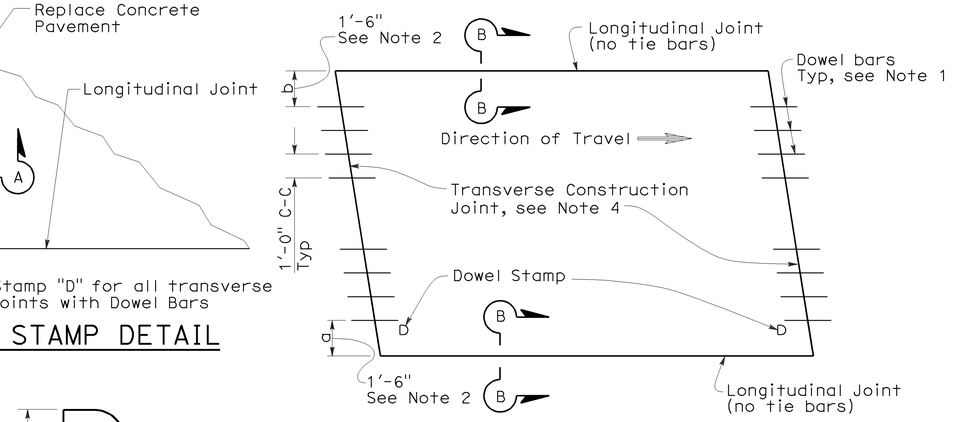
5-8-09



PLAN

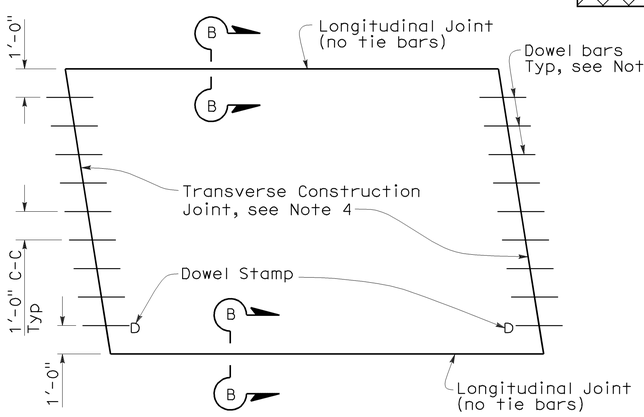


DOWEL STAMP DETAIL



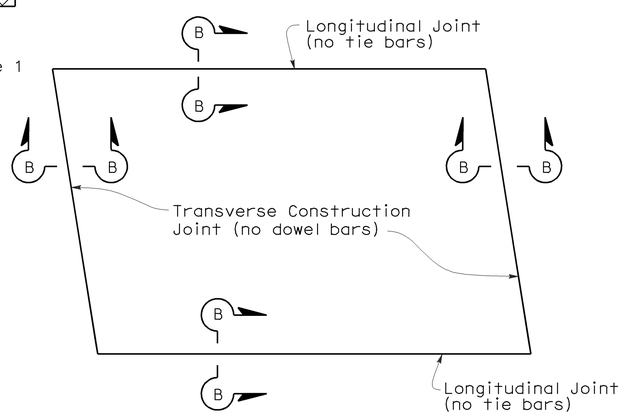
TYPE I

(traffic lane lines match longitudinal joints)



TYPE II

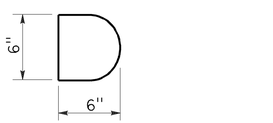
(traffic lane lines do not match longitudinal joints)

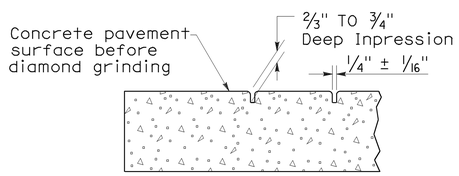


TYPE III

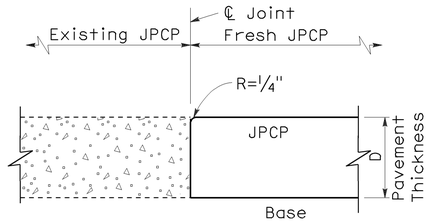
(for short term repairs < 5 yrs design life or for slab replacements with a cracking and seating operation)

SLAB LAYOUT

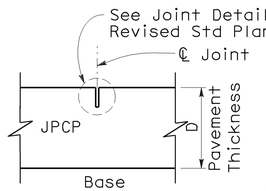




SECTION A-A



SECTION B-B



SECTION C-C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	32	40

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. C49042 — Exp. 9-30-10 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-13-11

NOTES:

1. For details not shown, see Revised Standard Plan RSP P10.
2. Where the existing outer shoulder pavement is asphalt concrete pavement, the "a" dimension shall be 1′-0" and the "b" dimension shall be 2′-0".
3. Side forms shall be used where edge of pavement is adjacent to asphalt concrete.
4. For detail, see Transverse Construction Joint for existing concrete pavement detail on Revised Standard Plan RSP P10.
5. Transverse joint to match skew of existing joint. Omit dowel bars.
6. This Standard Plan only applicable when replacing multiple slabs in the same lane is less than 100′.

LEGEND

Replace Concrete Pavement (See Slab Layout Detail)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT-INDIVIDUAL SLAB REPLACEMENT

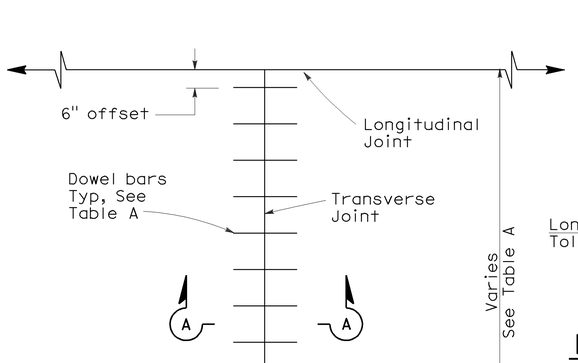
NO SCALE

RSP P8 DATED MAY 15, 2009 SUPERSEDES RSP P8 DATED SEPTEMBER 1, 2006 AND STANDARD PLAN P8 DATED MAY 1, 2006 - PAGE 123 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P8

2006 REVISED STANDARD PLAN RSP P8

5-8-09



TRANSVERSE JOINT DOWEL BAR LAYOUT

PLAN

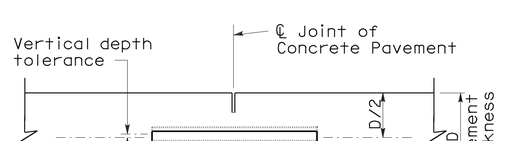
HORIZONTAL OFFSET TOLERANCE

PLAN

LONGITUDINAL TRANSLATION TOLERANCE

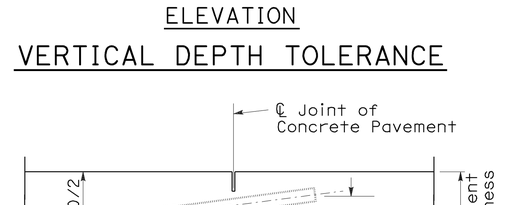
PLAN

HORIZONTAL SKEW TOLERANCE



ELEVATION

VERTICAL DEPTH TOLERANCE



ELEVATION

VERTICAL SKEW TOLERANCE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	33	40

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. C49042 — Exp. 9-30-10 CIVIL — STATE OF CALIFORNIA

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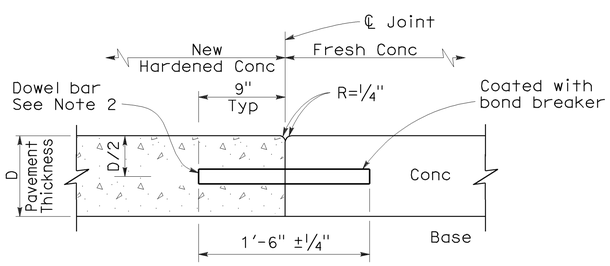
To accompany plans dated 6-13-11

NOTES:

1. See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
2. 1½" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1¼" Dia smooth dowel bars.
3. For widths not shown, see Project Plans.
4. If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the ¼" radius, as shown.

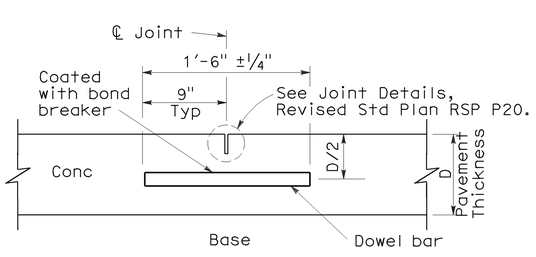
TABLE A (See Note 3)

Dowel Bar Transverse Spacing Table	
Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4

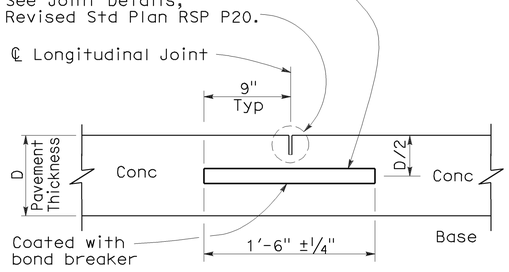


SECTION A-A

TRANSVERSE CONSTRUCTION JOINT DETAIL

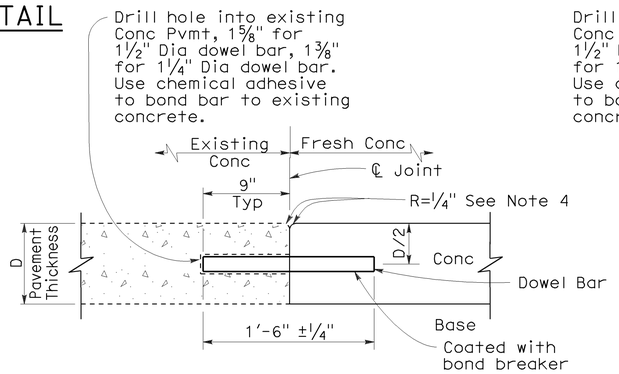


TRANSVERSE CONTRACTION JOINT



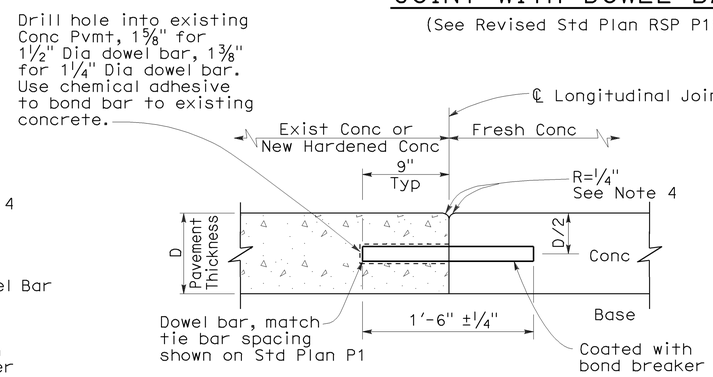
LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)



TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT

(Drill and bond locations)



LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-DOWEL BAR DETAILS

NO SCALE

RSP P10 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P10
DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P10

2006 REVISED STANDARD PLAN RSP P10

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	34	40

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. C49042 — Exp. 9-30-10 CIVIL — STATE OF CALIFORNIA

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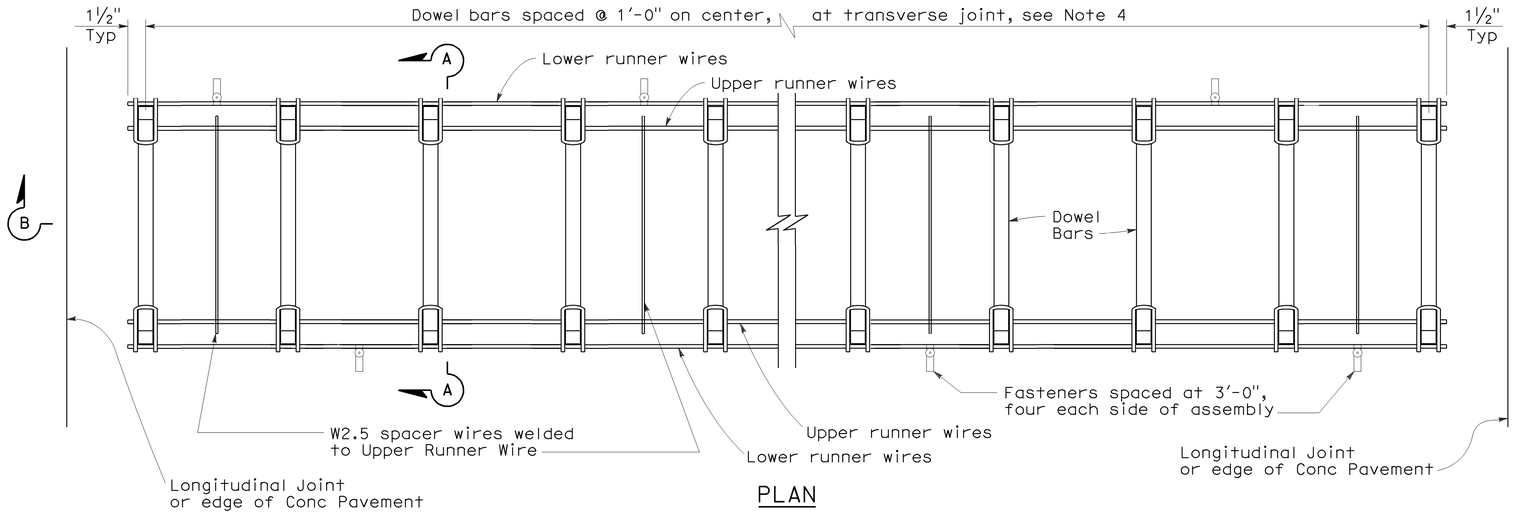
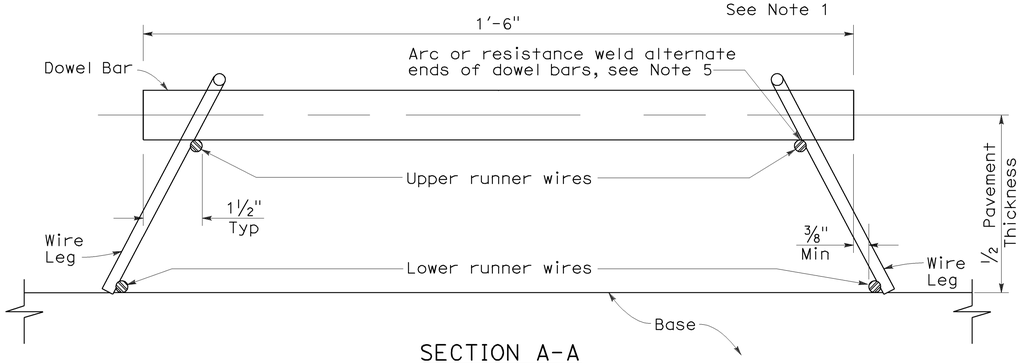
To accompany plans dated 6-13-11



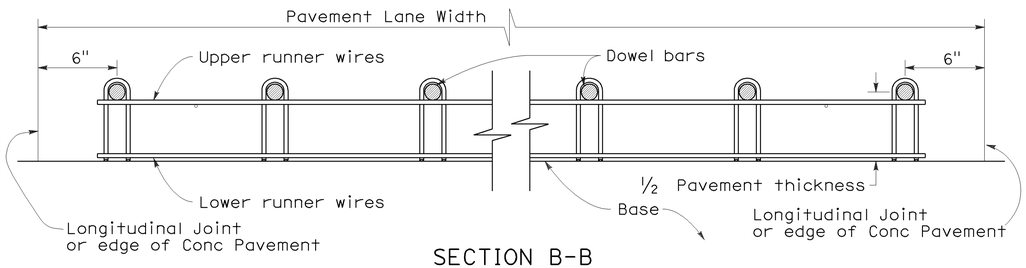
PLAN

DOWEL BAR BASKET (TRANSVERSE JOINT)

See Note 1

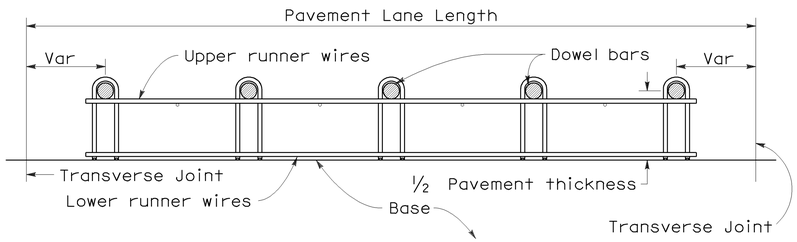


SECTION A-A



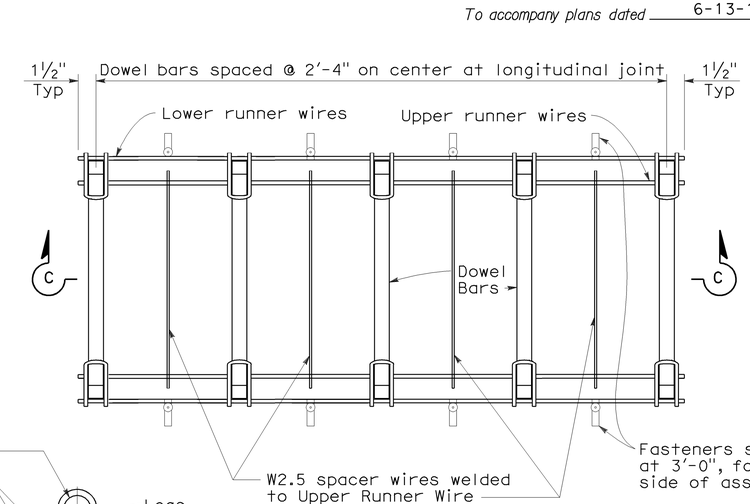
SECTION B-B

See Note 1



SECTION C-C

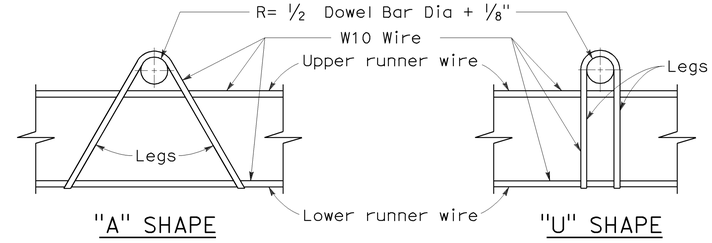
See Notes 1 and 4



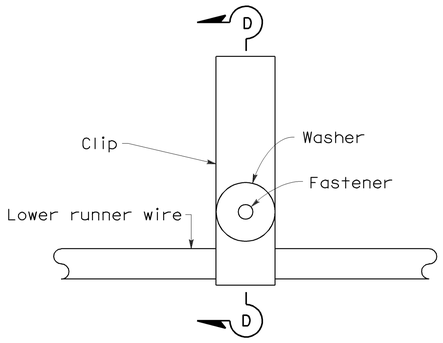
PLAN

DOWEL BAR BASKET (LONGITUDINAL JOINT)

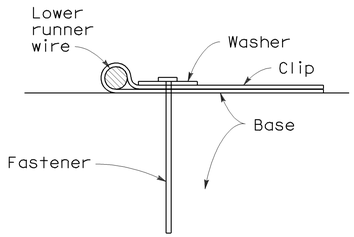
See Note 1



ASSEMBLY FRAME DETAILS



PLAN



SECTION D-D

FASTENER DETAIL

NOTES:

1. "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
2. Wire sizes shown are minimum required.
3. All wire intersections are to be resistance welded.
4. Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
5. Weld may be at top or bottom of dowel bar.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-DOWEL BAR BASKET DETAILS

NO SCALE

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P12

2006 REVISED STANDARD PLAN RSP P12

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	35	40

William K. Farnbach
REGISTERED CIVIL ENGINEER

June 5, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. C49042 — Exp. 9-30-10 CIVIL — STATE OF CALIFORNIA

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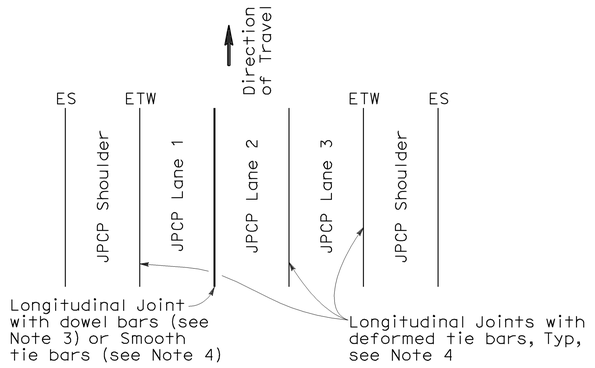
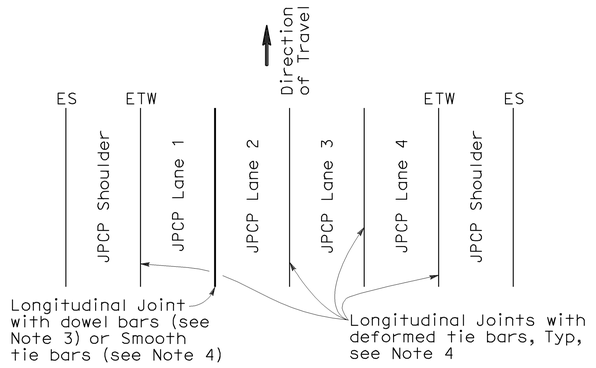
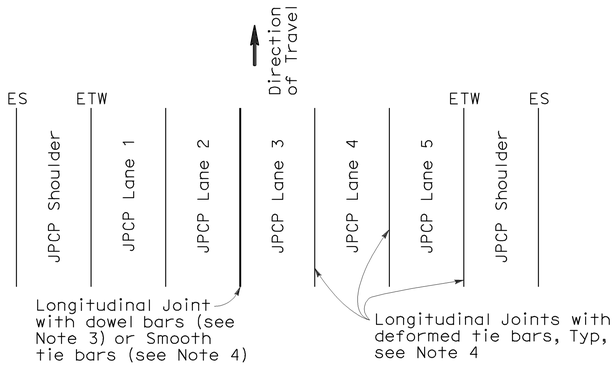
To accompany plans dated 6-13-11



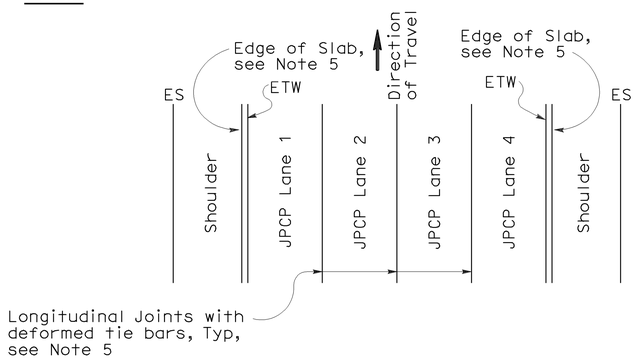
3 LANES WITH TIED CONCRETE SHOULDERS
PLAN



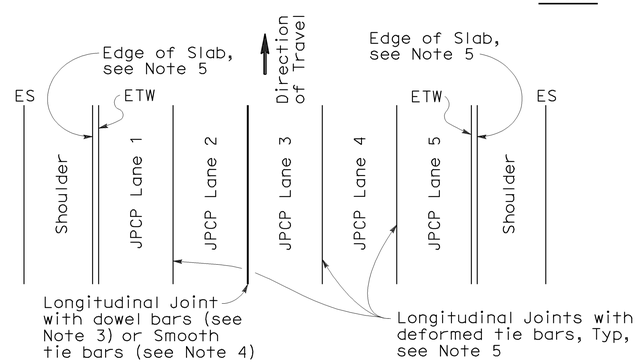
4 LANES WITH TIED CONCRETE SHOULDERS
PLAN



5 LANES WITH TIED CONCRETE SHOULDERS
PLAN



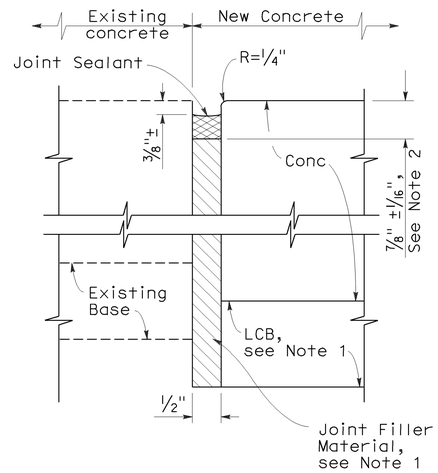
4 LANES OR LESS WITH WIDENED SLAB
PLAN



5 LANES WITH WIDENED SLAB
PLAN

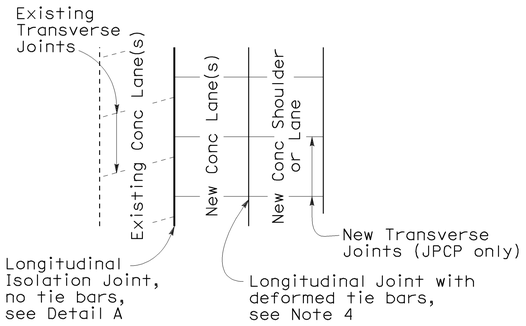
NOTES:

1. Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
2. Use $\frac{5}{8}$" ±$\frac{1}{16}$" dimension for silicone sealant.
3. See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
4. See Revised Standard Plan RSP P1.
5. See Revised Standard Plan RSP P2.

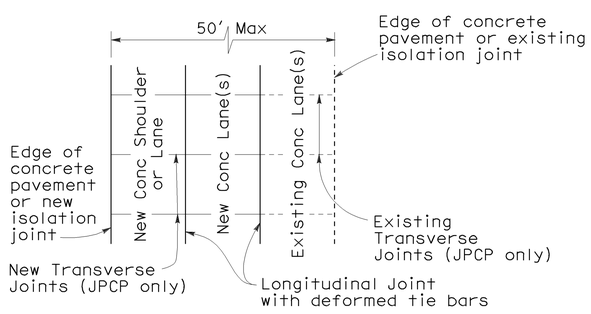


DETAIL A
ISOLATION JOINT

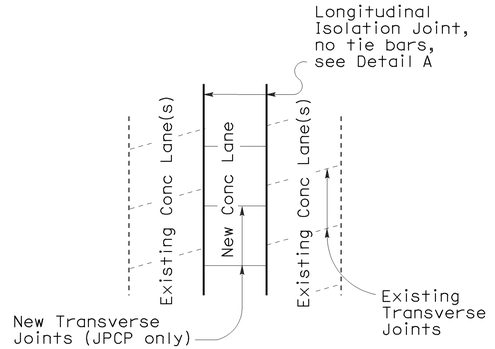
NEW CONSTRUCTION
Location of Longitudinal Joints
(For JPCP)



CASE 1
PLAN
Transverse Joints do not align between new and existing



CASE 2
PLAN
Transverse Joints align between new and existing



CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN
Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION
(For JPCP and CRCP)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-LANE SCHEMATICS AND ISOLATION JOINT DETAIL

NO SCALE

RSP P18 DATED JUNE 5, 2009 SUPERSEDES RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P18

2006 REVISED STANDARD PLAN RSP P18

5-14-09

NOTE:

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	36	40

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. C49042 — Exp. 9-30-10 CIVIL — STATE OF CALIFORNIA

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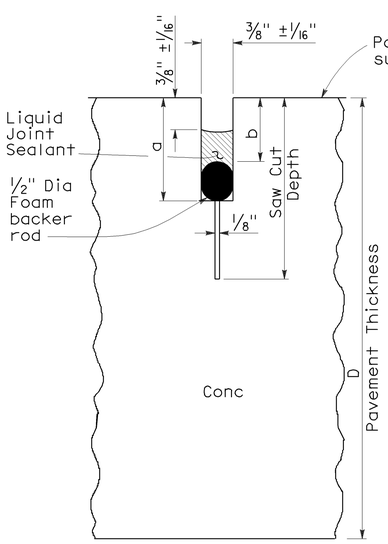
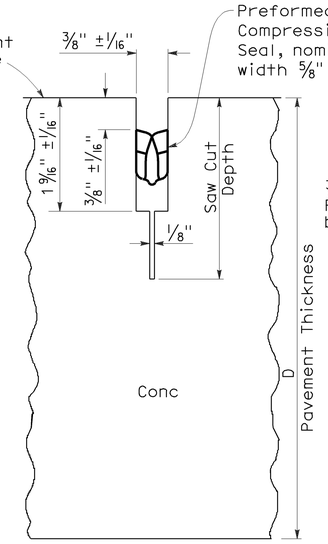
To accompany plans dated 6-13-11



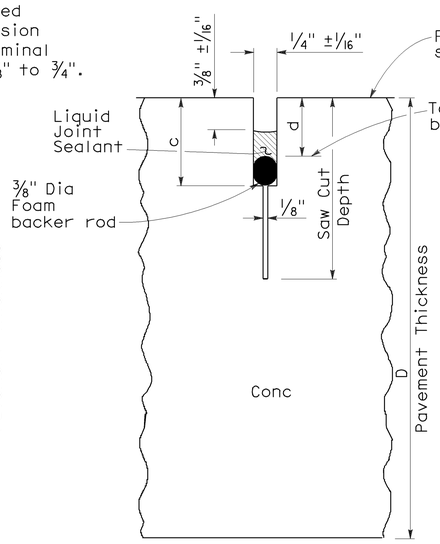
LIQUID SEALANT



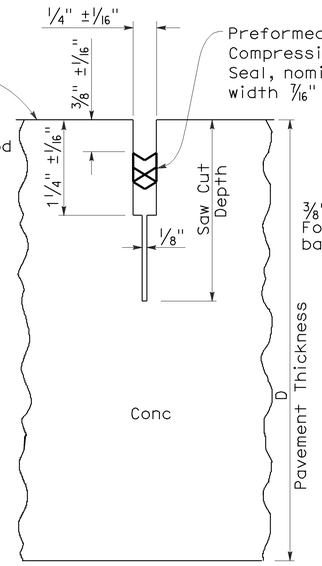
COMPRESSION SEAL

TYPE A1

Transverse Contraction Joints



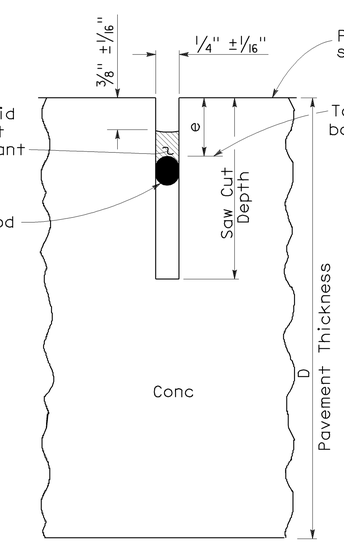
LIQUID SEALANT



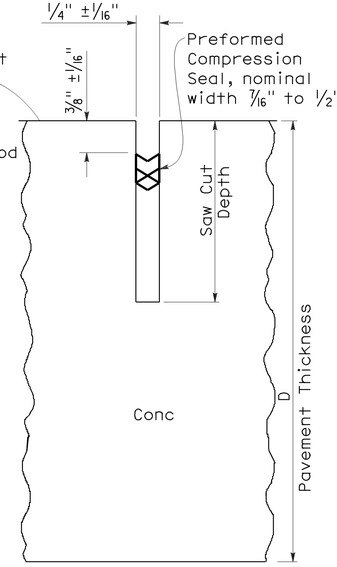
COMPRESSION SEAL

TYPE A2

Longitudinal Contraction Joints



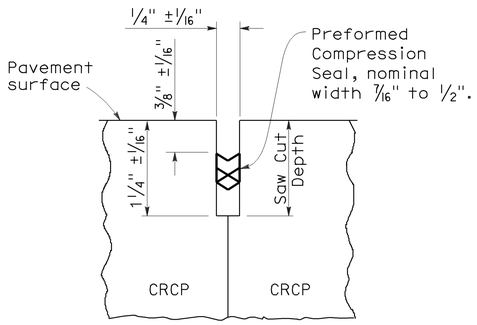
LIQUID SEALANT



COMPRESSION SEAL

TYPE B

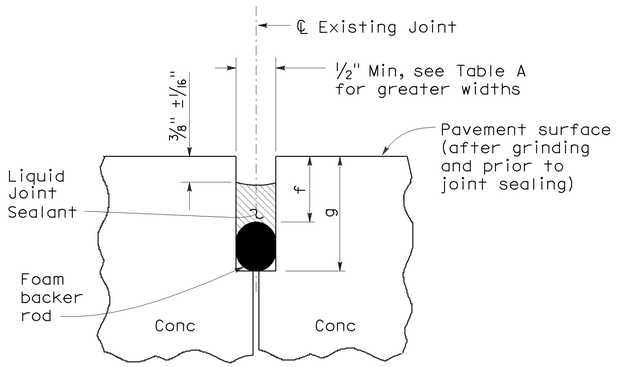
Longitudinal or Transverse Contraction Joint



COMPRESSION SEAL

TYPE C

Transverse and Longitudinal Construction Joints (For CRCP)



LIQUID SEALANT

TYPE R

Retrofit Transverse and Longitudinal Joints

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILCONE	1" ±1/16"	5/8" ±1/16"	15/16" ±1/16"	9/16" ±1/16"	9/16" ±1/16"
ASPHALT RUBBER	1 3/16" ±1/16"	3/4" ±1/16"	1 1/16" ±1/16"	11/16" ±1/16"	11/16" ±1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	37	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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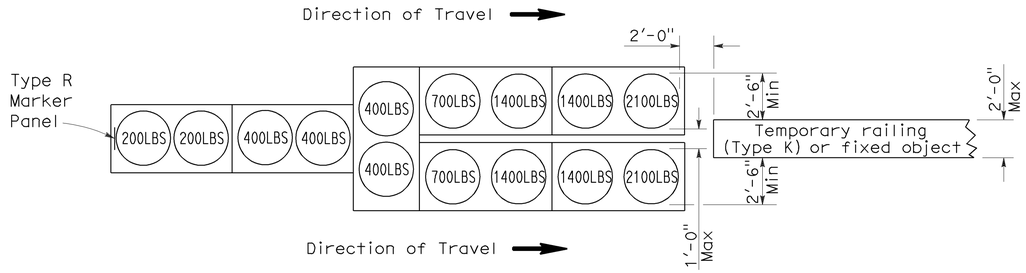
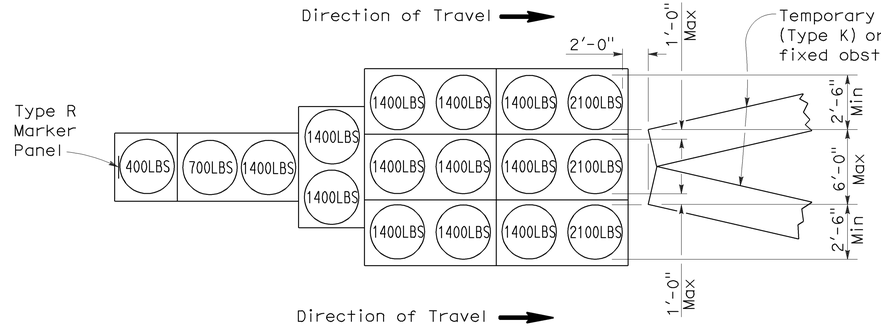
To accompany plans dated 6-13-11



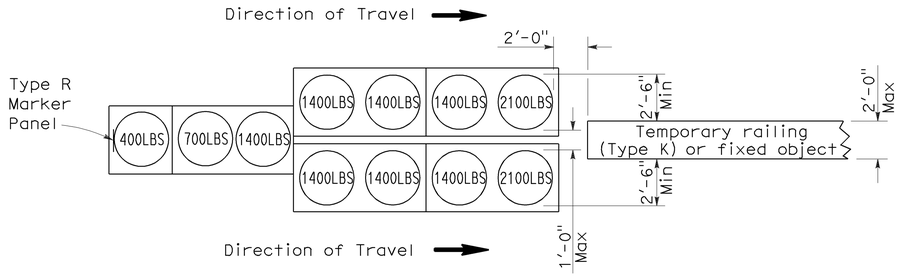
ARRAY 'TU14'

Approach speed 45 mph or more



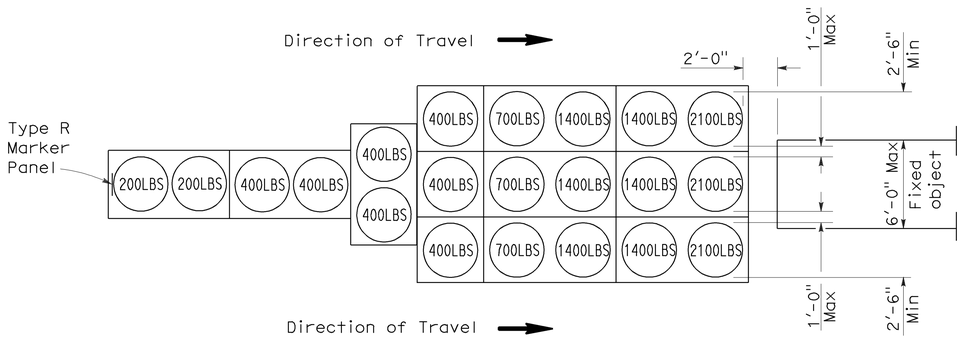
ARRAY 'TU17'

Approach speed less than 45 mph



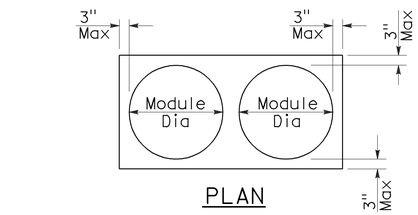
ARRAY 'TU11'

Approach speed less than 45 mph

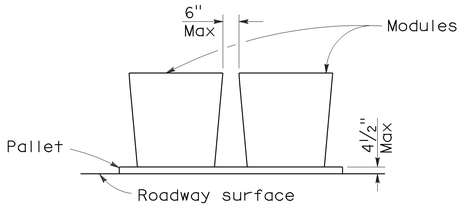


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	38	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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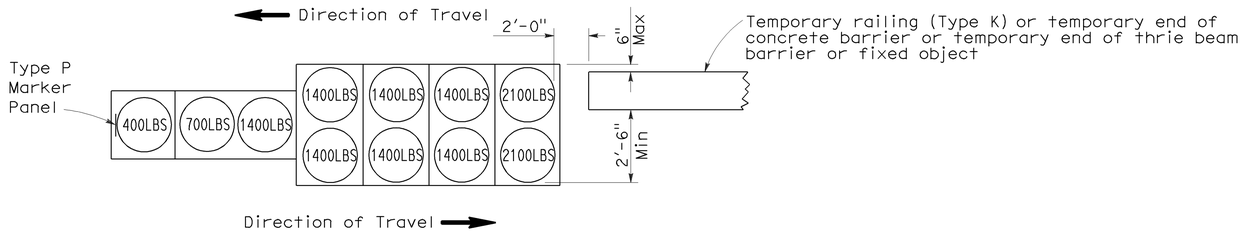
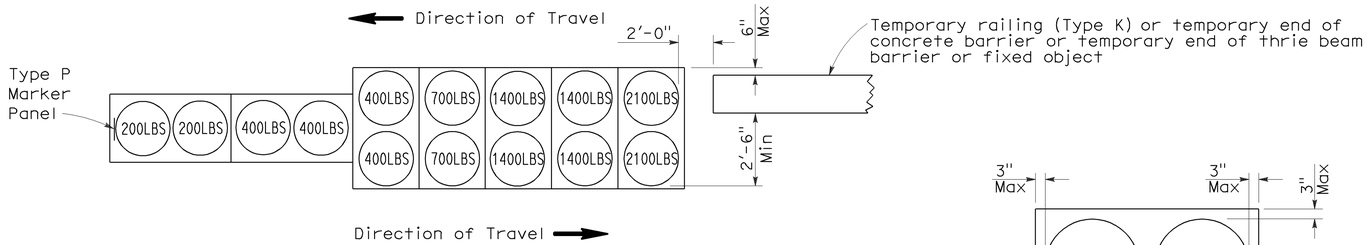
To accompany plans dated 6-13-11



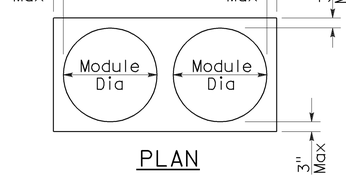
ARRAY 'TB11'

Approach speed less than 45 mph

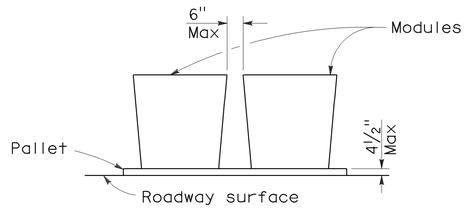


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	99	29.0/30.8	39	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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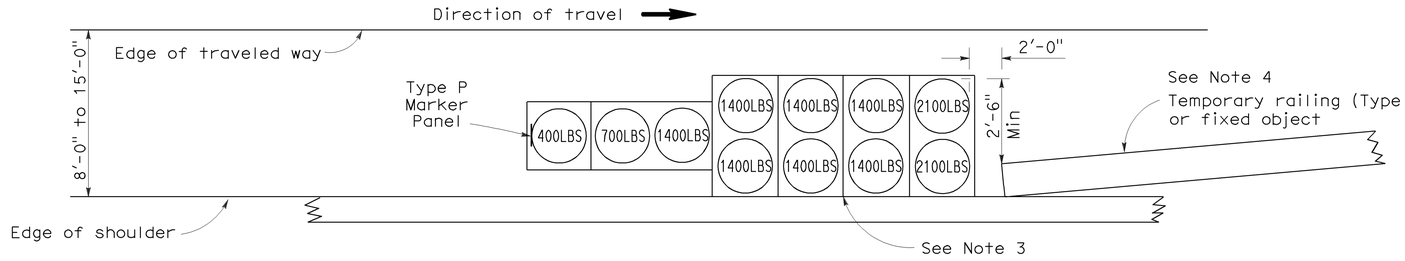
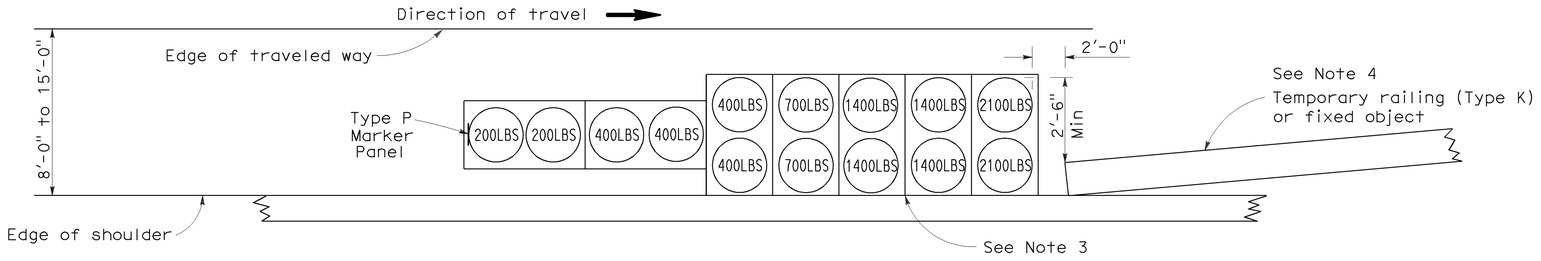
To accompany plans dated 6-13-11



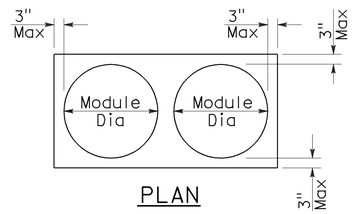
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

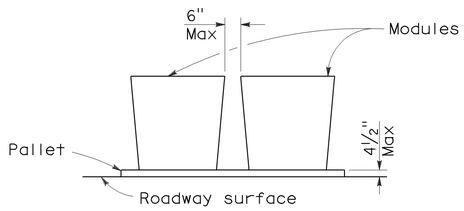


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

5-15-08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99	29.0/30.8	40	40

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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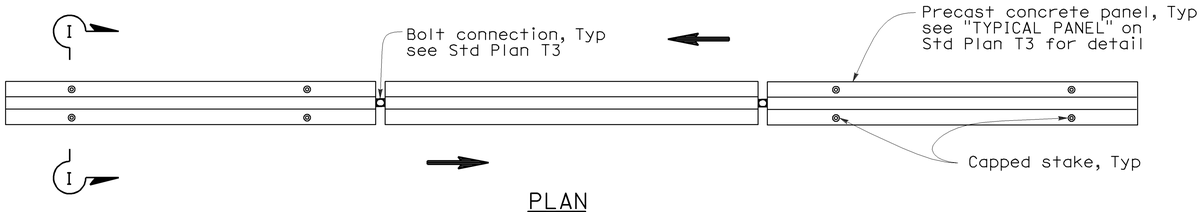
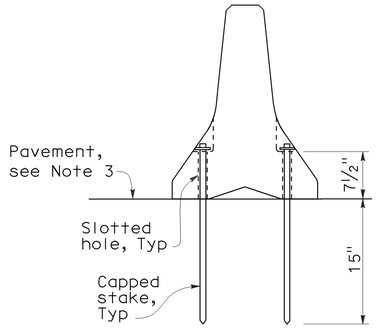
To accompany plans dated 6-13-11



PLAN

RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC

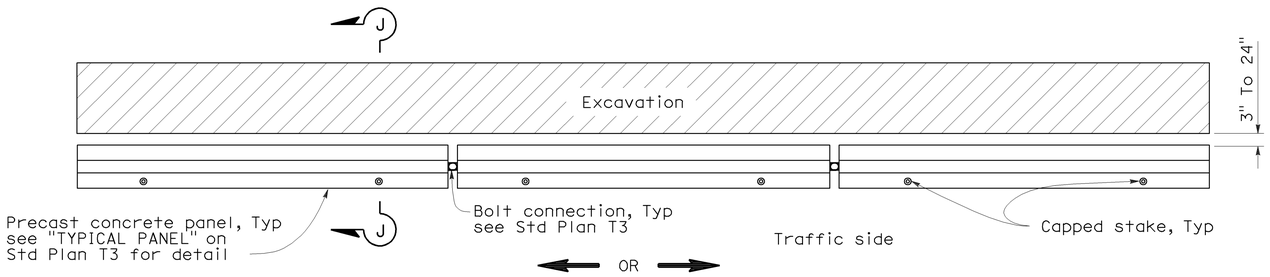
See Note 1



SECTION I-I

NOTES:

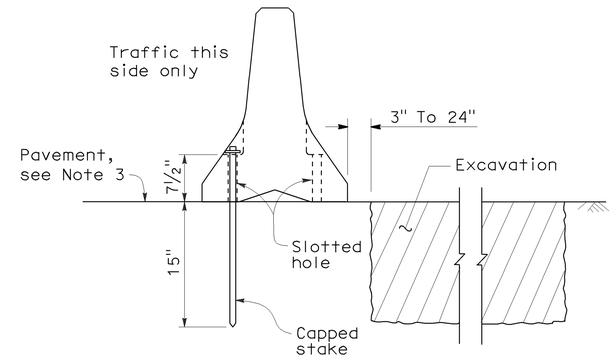
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by ⟶.



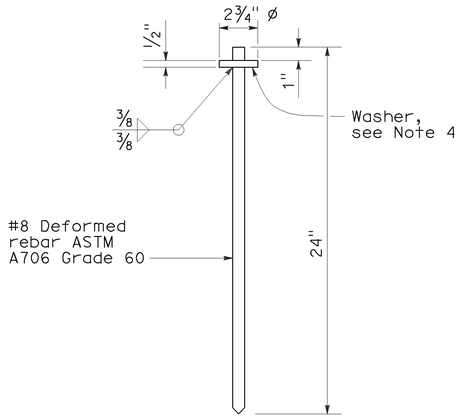
PLAN

RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION

See Note 2



SECTION J-J



CAPPED STAKE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY RAILING (TYPE K)

NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T3A

2006 NEW STANDARD PLAN NSP T3A

8-31-10